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# BRAZIL AT WAR



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## FOREWORD

THE FIRST EDITION of this publication made its appearance at a time when all Brazil was throbbing with excitement over the news that a Brazilian Division had just landed in Naples and was preparing to go into action against the common enemy. The entrance of these Brazilian Army troops in the European theater, the first to be represented from Latin America, was no mere gesture of bringing a token force into a fighting area. These troops set forth to avenge the thousands of their countrymen who were the victims of the inexpressibly cruel German U-boat packs, to seek vengeance for the hundreds of Brazilians whose bodies had been washed ashore on Brazil's sands, mute evidence of German brutality.

Fighting side by side with their American comrades against a ruthless foe, the Brazilians helped bring the Italian campaign to a victorious conclusion. The sight of the green, yellow and blue flag of Brazil flying on the battlefield was something that thrilled all liberty-loving people engaged in the conflict. The courage, resourcefulness and adaptability of Brazil's ground and air forces were repeatedly praised by high-ranking Allied officers as well as common soldiers.

Brazil's entrance into the war was the case of a traditionally peace-loving country, slow to anger, being jolted to action by a rapid series of treacherous and perfidious deeds of an enemy swaggering in his assurance that no retaliation would be taken against him. Yet those who were in Rio on December 7, 1941, and witnessed the reaction of the Brazilian people as their press and radio related to them the attack on Pearl Harbor unanimously report that the reaction was the same as would be expected if it were Brazilian territory that had been attacked. The result was an instantaneous resolve on the part of all Brazilians everywhere to work, to fight and to pool their resources into the common cause so that once and for all this tyranny might be defeated and destroyed. Brazil's all-possessing thought was a determination to contribute everything within her power to the Allied war effort in order to bring about certain and complete victory.

Brazil has thus indicated her belief in and adherence to the Good Neighbor Policy. Shunning wars of conquest, the Brazilian people, always friends of their neighbors, have shown toward the other peoples of the Western Hemisphere, and indeed toward all peoples with whom in the past and present they have had diplomatic and trade relations, the most devoted spirit of cooperation in the defense of mutual interests. This does not mean that Brazil has followed the policy of peace at any price. In her colonial days, though it took half a century, the peaceful tillers of her soil finally expelled the greedy adventurers who made up the Dutch Company of the West Indies, come to conquer and live off the land by the exercise of armed force. Nor was independence finally achieved in 1822 without bitter and bloody battles, such as occurred in the revolutions of 1720 and 1789. And the war with Paraguay,



needlessly brought about by a resolute Paraguayan dictator, though it was long and bitter and marked with bravery on both sides, ended with an understanding and a friendship which has grown with the years. In World War I it was likewise the submarine which led Brazil to declare war on Germany and to throw her weight into the effort on the side of the Allies.

Brazil's collaboration with the United States in the present conflict began very early. As the following pages show, the ties between the two countries have been greatly strengthened by the many agreements which make available to the United States not only the wealth of Brazilian raw materials and manufactured products, but also Brazilian airports and Brazilian military bases for the use of the forces of both countries. Brazil has thus demonstrated that she is not only an ardent supporter of the Good Neighbor Policy but that in the common cause no asset whatsoever possessed by any one nation is too precious to be reserved for her sole use. Brazil's attitude has largely been governed by the respect and admiration which she holds for the people of the United States of America. Indeed, she feels that there is a very great deal in common between the people of the United States of Brazil and the United States of America. The difference of language is trivial as compared with the similarities of mental attitude and national development. Viewing the remarkable progress of the United States since the achievement of her independence, non-Brazilians have been inclined to call Brazil, whose independence is more recent, "the land of the future." Her Herculean effort as one of the United Nations has brought this future closer to the present. If the United States is the arsenal of the United Nations, the following pages show that Brazil is the supplier of strategic raw materials for that arsenal.

Though the war in Europe is won, the United Nations are now concentrating on knocking out the remaining enemy—Japan. And in that task, Brazil continues to supply a tremendous amount of essential war materials that will eventually make such a victory possible.



# BRAZIL AT WAR

## I. SOME PERTINENT DATES AND DATA

It is well first to review the events of recent history in chronological sequence, so that the story of the war may be brought into clearer focus as it applies to Brazil and Brazilian-American relations.

### 1941

DECEMBER 7<sup>TH</sup>: Pearl Harbor is attacked by the Japanese. President Getulio Vargas telegraphs President Roosevelt, pledging Brazil's solidarity with the United States.

### 1942

JANUARY 15<sup>TH</sup>: The Third Conference of the Foreign Ministers of the American Republics meets in Rio de Janeiro, under the chairmanship of the Honorable Oswaldo Aranha, Brazil's Minister of Foreign Affairs.

JANUARY 28<sup>TH</sup>: The Third Conference of the Foreign Ministers of the American Republics comes to a close. Brazil announces her break of diplomatic and economic relations with the Axis nations, as a result of the recommendations adopted.

According to one of the recommendations which were approved, it is agreed that these nations "must be mobilized economically to assure a supply of basic and strategic materials in the shortest possible time to the countries of this hemisphere. Not only the supply of materials for military use but also of products essential to civilian needs. . . . Mobilization should include measures to increase production and to eliminate or minimize administrative formalities, regulations and restrictions which would impede production and free flow of these materials. In addition, measures are adopted to strengthen the finances of the countries contributing to this effort."

MARCH 3<sup>RD</sup>: In Washington an agreement is signed between the United States and Brazil establishing the Amazon region as the principal source of raw materials essential to the defense of the Western Hemisphere. It also provides that the United States will lend military aid to Brazil, in accordance with the Lend-Lease program by which she has been lending such aid to Great Britain, Russia and China. The treaties are signed in the Department of State by Mr. Sumner Welles and Mr. Souza Costa (Brazil's Minister of Finance). The four points of the agreement are as follows:

- 1) A survey of Brazilian natural resources and the granting of a credit of \$100,000,000 by the Export and Import Bank for their development;
- 2) the granting of aid under the Lend-Lease Act;
- 3) Brazil agrees to sell to the Rubber Reserve Corporation all rubber and manufactured rubber goods in excess of her domestic needs. A fund of \$5,000,000 is created to be used by the Federal Rubber Reserve in collaboration with the Brazilian Government, for redevelopment of rubber production in the Amazon region. This agreement is valid for five years.
- 4) The Itabira Iron and Vitoria-Minas Railroad are transferred to Brazilian Government ownership under the name of "Companhia Vale do Rio Doce." The Export and Import Bank grants the new



company a credit of \$15,000,000 to be used in the renewal of mining equipment, in the improvement of the river bed, and in the increase in the railroad's rolling stock—all this with a view to supplying the Companhia Vale do Rio Doce with the proper equipment for the extraction and transportation of iron ore and, gradually, to reach a production quota of 1,500,000 long tons of iron ore per year.

MARCH 14TH: An agreement is signed in Washington between Brazil and the United States providing for the sanitation of the Amazon Valley and other sections of Brazilian territory. The Institute of Inter-American Affairs is to maintain a service entitled "Special Service of Public Health," directly subordinate to the Brazilian Ministry of Education and Health, which is to include among its duties:

- 1) Sanitation of the Amazon Valley, especially preventive treatments and research work on malaria, and medical assistance to the workers connected with the economic development of the region;
- 2) the training of specialized physicians and sanitary engineers, public health nurses and other technicians;
- 3) collaboration with the "Serviço Nacional de Leprosia" (National Leprosy Service) and, through it, with the state sanitary departments in the fight against leprosy.

JUNE: A contract is signed in Washington, D. C., by which the Fairchild Aircraft Corporation is to begin immediate construction of Fairchild training planes for Brazilian cadets.

JULY: The Brazilian Rubber Credit Bank is created in Brazil with the financial assistance of the United States.

The "Comissão de Controle dos Acôrdos de Washington" (Control Commission on Washington Agreements) is inaugurated in Rio de Janeiro to oversee the execution of the agreements signed with the United States.

An agreement is signed in Washington between the United States and Brazil for the stabilization of Brazilian currency.

JULY 24TH: By the "Ipecac Agreement," signed in Rio de Janeiro between Brazil and the United States, the Brazilian Government agrees to establish and maintain an export restriction on ipecac for a period of eighteen months, limiting the export of this product to the United States, the British Empire and those American Republics with export controls recognized by the Government of the United States. In case purchases by these countries do not absorb all the exportable quantity of Brazilian ipecac during the period of the agreement, the Defense Supplies Corporation agrees to purchase the surplus in any amount up to 150 metric tons.

By the "Burlap Agreement," signed in Rio de Janeiro between Brazil and the United States, Brazil agrees to establish and maintain during the life of the agreement (until December 31, 1943) export restrictions on her production of burlap manufactured from domestic or imported fibers, limiting sales to the Defense Supplies Corporation or its nominees, except in the event that Brazil's exportable burlap should exceed 50 million yards available for shipment during the first year of the agreement. Such excess will be offered to the Defense Supplies Corporation at a price to be negotiated. In the event the surplus is more than 100 million yards during the seasonal year of the agreement, it will be offered to the Defense Supplies Corporation at a price to be negotiated, and in the event the Defense Supplies Corporation



does not purchase such surplus in either of the two years covered by the agreement, Brazil may then dispose of it in any manner she desires.

By the "Rotenone Agreement," signed in Rio de Janeiro between Brazil and the United States, Brazil agrees immediately to establish and maintain, during a period of four years, export restrictions on rotenone-bearing roots, either unground or powdered, having a rotenone content of not less than three per cent, restricting the export of these products to the United States or to consignees named by the Commodity Credit Corporation.

JULY 25TH: An agreement is signed in Rio de Janeiro, valid for four years, by which the United States will purchase, during the first two years, all the exportable babassú kernels and oil and during the last two years up to 100,000 metric tons of these products per year.

By the "Linters Agreement," signed in Rio de Janeiro between the United States and Brazil, the Brazilian Government undertakes, through the issuance of export licenses and other control regulations effective immediately, to prohibit exports of cotton linters and cottonseed hull fiber of the grades and for the periods referred to in the agreement, except to: (1) the Defense Supplies Corporation, or its consignees, appointed by the Secretary of Commerce; (2) United Kingdom purchasers; and (3) other American Republics with export control. The agreement is valid from August 1, 1942 to July 31, 1943 inclusive.

The "Castor Seed Agreement," signed in Rio de Janeiro between the United States and Brazil, specifies that the Government of Brazil will establish and maintain for a period of one year, beginning July 1, 1942 and ending June 30, 1943, export restrictions on castor beans and oil, restricting exports to the United States and its nominees, except in the event Brazil's production should exceed 200,000 long tons of castor beans or the equivalent in castor oil, during the twelve months beginning July 1, 1942. Such surplus will be offered to the Commodity Credit Corporation and in the event this Corporation does not purchase it, Brazil may then dispose of the surplus in any manner she chooses.

AUGUST: Brazil appoints her representatives to the joint Brazil-United States Defense Commission in Washington, D. C.

AUGUST 22ND: Brazil announces that a state of war exists between herself and Germany and Italy as a result of the torpedoing of Brazilian ships operating in coastwise navigation off her coast.

SEPTEMBER 3RD: An agreement is signed in Rio de Janeiro between Brazil and the United States to develop the production of foodstuffs in Brazil, especially in the Amazon Region States, the North and Northeast, including the State of Baía. This agreement includes the following:

- a) Technical assistance for the increase and improvement of production;
- b) Provision of tools, equipment, insecticides, etc., for increased production;
- c) An increase in the budget of the Departments in charge of Animal and Vegetable Production for the establishment of modern agricultural methods and equipment.
- d) Development of plans and technical assistance for irrigation, drainage and soil conservation works;
- e) Collaboration in problems of conservation, distribution, storage and handling of food products;
- f) Technical and financial assistance for agricultural colonization;



- g) Improvement in nutrition for the populations in areas to which this agreement applies.

SEPTEMBER 16TH: General mobilization throughout Brazil.

OCTOBER 3RD: A "Coffee Agreement" is signed in Rio de Janeiro between Brazil and the United States. Both governments assume obligations to make every effort to facilitate shipments to the United States of the full amount of quotas established by the Inter-American Coffee Agreement, subject, however, to shipping priorities and to availability of ships. For the quota year 1941-1942 the Commodity Credit Corporation agrees to purchase, or underwrite up to 90% of the F.O.B. value of such contracts as may remain unshipped at the end of the quota year.

A "Cocoa Agreement" is signed in Rio de Janeiro between Brazil and the United States. Commodity Credit Corporation agrees to purchase 700,000 bags of cocoa of United States standards of the intermediate crop which has arrived or is arriving at Baía and Ilheos, less the amount of this crop purchased by any other buyers in the United States of America. Commodity Credit Corporation agrees to purchase an additional 600,000 bags of the principal crop of United States standards, less the amount of this crop purchased by any other buyers in the United States of America.

OCTOBER 3RD: An agreement is signed in Rio de Janeiro between the United States and Brazil regarding Brazil nuts. The Rubber Reserve Corporation agrees to purchase the existing stock produced in the 1942 season in the Belém area up to 7,500 tons unshelled and 500 tons of shelled nuts; and from the Manáus area not more than 2,500 tons, both kinds included.

An agreement is signed in Rio de Janeiro between Brazil and the United States regarding the establishment of a system for allocation and supply of rubber tires and tubes considered essential to the American Republics. The United States will determine the quarterly allocations to the American nations and when these have been determined, the Government of Brazil will advise the United States as to the portion of these allocations she will supply. With respect to manufactured rubber goods, other than tires and tubes, which are or may be produced in Brazil, both countries agree to establish a plan of supply for the other American nations similar to the system adopted for tires and tubes.

A supplementary agreement is signed in Rio between Brazil and the United States by which the Export and Import Bank opens a credit of \$14,000,000 for the Companhia Vale do Rio Doce to develop the iron mines, improve the Vitoria-Minas Railroad and purchase equipment for the port of Vitoria.

DECEMBER: In Washington an agreement is signed between Brazil and the United States for a new decentralization plan of import regulations, which were heretofore under the Office of Lend-Lease Administration and the Board of Economic Warfare.

Prime Minister Winston Churchill, interviewed by Brazilian newspapermen, declares that Great Britain, now, as well as in the past, is proud to have Brazil as her ally.

## 1943

JANUARY: In compliance with one of the recommendations of the Third Conference of the Foreign Ministers of the American Republics, Brazil



and the United States inaugurate a special Public Health Service to bring modern sanitary services to the Brazilian rubber-producing regions.

JANUARY 28TH: President Getulio Vargas meets President Franklin D. Roosevelt in Natal, Brazil. The White House releases the following note to the press: "The two Presidents are old friends and their conversation was greatly advantageous and useful."

FEBRUARY: Brazil signs the United Nations Declaration and announces her support to the Atlantic Charter.

JUNE: Brazil and the United States sign an agreement regarding military service which is to be rendered by Brazilian citizens residing in the United States and by American citizens residing in Brazil whenever summoned to active duty.

June is named the "Rubber Month" in Brazil and a drive is opened for the development of rubber production. President Roosevelt telegraphs President Vargas the following message: "The proclamation made by Your Excellency that June will be the Rubber Month in Brazil recalls once more to the people of the United States, the extraordinary contribution which the government and the people of Brazil are bringing to the cause of the United Nations, in the present emergency, by the Battle for Rubber . . . Brazil has already evidenced, in many ways, her uncompromising support of Inter-American unity. We, in the United States, acknowledge with pleasure this further proof of Brazil's determination to do her part in the struggle of all the United Nations."

JULY: The United States lends the Brazilian Government three ships, totaling 15,000 tons, for the transportation of salt and wheat to northern Brazil.

AUGUST 22ND: On the first anniversary of Brazil's entrance into the war, President Roosevelt sends President Vargas a telegram with the following statement: "In August 1942, the Axis forces still held the general initiative, and their arrogant leaders boasted about their victories. The short year which has elapsed since Brazil made her historic decision, saw a decisive change in the tide of events. The forces of the United Nations are now advancing on every front, as well as on the sea and in the air. The role played by Brazil in this change was a substantial one. Brazil's Navy and Air Forces joined ours in the fight against the submarine menace. Her Army is firmly getting ready to take its place in the active theater of operations. The whole nation has been dedicated to the task of securing the maximum supplies of strategic materials, in which Brazil is so wealthy, and which are so essential to our total war."

OCTOBER: The Secretary of the Navy, Frank Knox, states during his stop in Recife: "The United States is very grateful to Brazil for her assistance in this war, both on sea and in the air. The people of the United States consider Brazil a great Ally."

OCTOBER: Brazil presents the American Army with 400,000 bags of coffee.

In accordance with an agreement signed in Rio, the United States is to purchase the whole Brazilian crop of pyrethrum flowers between October 30th, 1943 and December 31st, 1945.

NOVEMBER 4TH: In Washington, Brazil signs the agreement by which



the United Nations Relief and Rehabilitation Administration (UNRRA) is created.

An agreement is signed in Rio between Brazil and the United States for the furtherance of the project of sanitation and public health, covering chiefly the Amazon and Rio Doce valleys.

An agreement is signed in Washington between Brazil and the United States to increase the limit for the purchase of gold by Brazil to a total of \$300,000,000 (U. S.).

DECEMBER: The Brazilian Military Mission, under the leadership of General Mascarenhas de Moraes arrives in North Africa to make the necessary surveys before sending the Brazilian Expeditionary Force overseas.

DECEMBER 16TH: Discussing the maneuvers of the Brazilian Expeditionary Force, Brazil's War Minister, General Eurico Gaspar Dutra, remarks to *The New York Times* correspondent: "We are toughening these men to withstand the hardships imposed by modern warfare. Others, already trained, await in the northeast the order to sail overseas. The step we are taking is a proof of the 100 per cent collaboration which exists between Brazil and the United States. This is a war of tough men and highly perfected equipment. One of the reasons for our victories is the excellence of our equipment."

## 1944

JANUARY: Manned by officers of the Brazilian Air Force, the first group of pursuit planes leaves Rio de Janeiro, heads for undisclosed war fronts.

FEBRUARY 8TH: The new rubber agreement becomes effective, according to which production is to be carried out under the exclusive supervision of the Brazilian Government.

The Brazilian Government signs, with the governments of the United States and Great Britain, a pact by which Brazil agrees to sell to these two countries the exportable excess of the 1943-44 and 1944-45 rice crops, in accordance with conditions and prices made in the agreement.

MARCH: Word of the safe arrival of relief supplies donated by the Brazilian Red Cross for distribution among United States prisoners of war interned in Germany is received at American Red Cross headquarters in Washington. These supplies included five cases containing 240 cans of meat paste, fifteen cases containing 360 cans of corned beef, five cases containing 120 jars of meat extract, 69 cases containing 2,500 cans of fish, 16 cases containing 1,600 cans of sardines and 14 cases containing 420,000 cigarettes.

*The Cincinnati Enquirer*, Cincinnati's leading newspaper, says in an editorial: "Brazil has set a laudable example for other South American countries in her record of prosecution of the war against the Axis. She has almost completed the training of a large and efficient army; her air force already has contributed much to victory by its sinking of Nazi submarines; her plants and factories are producing for war. Brazil, in short, is in the fight as a full working-member of the United Nations. Within a short time, she will send an expeditionary force to the battle line. By her cooperation, Brazil shows her understanding of the need for complete unity between the Nations of North and South America. . . ."



Congressman F. Edward Hebert, after returning from a twenty thousand mile South American trip in the capacity of Chairman of a group from the Naval Affairs Committee of the House of Representatives, calls on President Roosevelt. The most amazing thing he learned during the visit, discloses Representative Hebert to the President, "was the cooperation in the war effort, particularly on the part of Brazil." Belém, Recife, Fortaleza, Natal and Rio de Janeiro were among the places toured by the Committee members, who inspected the naval installations and came away with the conviction that a great job had been done and that the South Atlantic had been swept clear of the submarine menace. Representative Hebert states his belief: "It was Brazil's cooperation that made possible the successful North African campaign by the Allies."

Representative W. Sterling Cole, another Congressman who visited Brazil, asserts that: "The United States bases at Natal, Recife, Belém and in the Guianas proved of the utmost importance during 1943's military activities, and that the expenditures could not be evaluated by conventional standards. At a critical time they helped us on the way towards victory, and must be viewed in terms of results achieved and not in dollars and cents. If all the Latin American bases were lost today, we would have been repaid for the investment many times."

Secretary of Navy Frank Knox, speaking before the House Foreign Affairs Committee, in urging legislation for the extension of the Lend-lease Act for a period of three years past its expiration date of June 30, 1944, emphasizes the advantages and benefits of "pulling together," and stresses the great contribution made by Brazil to the war effort. "Brazil," he declares, "is protecting South American sea lanes and convoying merchant ships. Her sailors on lend-lease patrol boats have rescued survivors of torpedoed vessels and Brazilian pilots, manning lend-lease aircraft, have sunk and damaged Nazi submarines."

MARCH 14TH: A dispatch from Orlando, Florida, says that a pursuit squadron of Brazilian fliers is on its way to an unannounced destination, ready to take its place beside the fighting Allies as the first combat group to carry the flag of a South American nation overseas. Lieut. Col. J. S. Dennison, who guided the Brazilians through the final phases of their training in actual combat maneuvers, classes the Brazilian fliers as "excellent pilots."

MARCH 20TH: *The New York Sun* publishes an interview with Vice Admiral Jonas H. Ingram, obtained by Staff Correspondent W. C. Heinz, in which the U. S. Commander of the South Atlantic Naval Forces says:

"... You're the first correspondent from the States to bother to come down here and see for yourself what kind of war we're fighting here and the thing I'd like you to tell them back home is that we think the biggest job we've done here has been with these Brazilians. They're intelligent, they've learned how to fight with us and they *are* fighting with us."

MARCH 27TH: In his official report to the Secretary of the Navy about the activities of the United States Navy, Admiral Ernest J. King, U.S.N., Commander-in-Chief of the United States Fleet, writes:

"... Vice Admiral Ingram's command (in the area of the South Atlantic) includes highly efficient surface and air units of Brazil, which country has wholeheartedly joined our team of submarine hunters. This team, in-



cidentally, turns its guns on surface raiders and other bigger game when the enemy provides the opportunity."

APRIL 26TH: In an article published by *The New York Herald Tribune*, Sumner Welles, former Under Secretary of State, says:

"... The history of our own military operations in North Africa and in Europe would have been far less satisfactory had it not been for the assistance given us by our Brazilian friends. From the moment of Pearl Harbor, popular sentiment in Brazil has wholeheartedly supported the cause of the United Nations. The use of Brazilian naval facilities was then placed unreservedly at the service of the United States Navy, and the Brazilian fleet and air force have ever since rendered invaluable help in patrolling and safeguarding convoy routes. The gradual elimination of the U-boat menace from the shipping lanes between the east coast of South America and our own ports, along which so many of our strategic materials and food supplies must be brought, has been due in no small part to this Brazilian cooperation. But even more important in its immediate practical effect was the decision of the Brazilian Government to make available to us air bases at points in northern Brazil for our use during the war, without which our air communications with North Africa and with the Middle East would have been both hazardous and long delayed. The rapidity and efficiency with which we were able to move during the early stages of our campaign in North Africa were due to this support given by Brazil. . . . No government and no people could have contributed more, within the limits of their capacity to the war effort of the United Nations than have the government and people of Brazil."

MAY: Vice Admiral Ingram asserts about the Brazilian Army:

"The Brazilian Army has developed amazingly in one year, both in size and efficiency, and its striking power is tremendous."

*The Sacramento Bee*, in an editorial entitled "Brazil Proves a Staunch Friend of the United States," praises the century of friendship and increasing cooperation between the two countries and says:

"... There was Natal, that vital port on the Brazilian bulge from which the easiest hop across the Atlantic to Dakar in Africa could be made. Today Natal boasts one of the most highly developed air bases in the world, from which innumerable planes have been dispatched to North Africa, the Near East and even to Russia and India. In permitting the development of such a base on her soil for use largely by the planes of a foreign power, Brazil has underwritten her confidence and trust in the United States.

"Without the full cooperation and assistance of the Brazilian Government in the utilization of Natal, the successful African campaign would have been delayed for two years, if there would have been a successful African campaign at all." This declaration is made in a report presented to the Naval Affairs Committee of the United States House of Representatives by three members of the Committee returning from their tour of United States naval bases in the Western Hemisphere. "The relations between the United States and Brazil," the report continues, "are most cordial. It is significant that the presence of our armed forces, both army and navy, has been established in the Brazilian nation without the signing of a single document or the enactment of a single treaty. Our presence in that country has been through the mutual consent and understanding of the peoples of the nations of the United States and Brazil and



is a most healthy prelude to our expected relations after victory is won and peace is once again established."

MAY 9TH: At the opening dinner of the First Conference of Commissions of Inter-American Development, General Henry H. Arnold, Commanding General of U. S. Army Air Forces, delivers an address in which he says:

"Brazil, Mexico, Cuba and the Caribbean nations were quick to offer naval and air forces and essential facilities in the campaign that cleared American waters of the submarine wolf packs."

JUNE 14TH: The Associated Press, in a dispatch from the Canal Zone, reveals that officers and men of the Brazilian Air Force are sharing an American base with United States pilots, on a 50-50 basis. (The base in question was Albright Field.)

The report states that, under seasoned United States instructors, members of the Brazilian Squadron "had made rapid strides in learning combat flying," and that after about eight weeks of day-in and day-out instruction had taken over all the details of the operation of their unit.

JULY 18TH: News is flashed around the world that the Brazilian Expeditionary Force arrived in Naples two days previously to join Allied armies fighting on the Italian front. The honor of being the first to set foot on European soil went to Major Barbosa Pinto. He was followed by the main body of the force, all of whom showed evident delight in arriving upon European soil. Headed by Major General João Baptista Mascarenhas de Moraes, with Brigadier General Euclides Zenobio da Costa in command of the infantry, the division was welcomed by Lieutenant General Jacob L. Devers, Deputy Supreme Commander of the United States forces in the Mediterranean theater of operations who said after inspecting the men: "This is going to make a good force and we shall expect a great deal from them in the near future."

Commenting editorially on this news, *The New York Times* writes today:

"The announced arrival in Italy yesterday of the Brazilian Expeditionary Force is an historic event. The unfurling in Europe of the green, blue and yellow flag of the United States of Brazil adds another banner to the array now confronting the Germans. It is the first time an army from the Western Hemisphere, other than those of Canada and the United States, has gone overseas to strike a blow for freedom. It gives every continent representation on the battlefield against the Axis.

"United States Army officers who helped train and equip the Brazilian troops are confident they will give a good account of themselves at whatever task is set for them by the High Command of the United Nations. Comradeship on the battlefield between the soldiers of the United States of the south and the United States of the north cannot fail to draw all citizens of our two countries still closer together."

AUGUST 22ND: Brazil commemorates the second anniversary of her entry into the war.

SEPTEMBER 15TH: Under the command of Lt. Col. Nero Moura, the Brazilian Air Squadron, following an intensive period of training at Suffolk Field, L. I., left for Italy. With the medical staff, accompanying the group, was Lt. Luther Vargas, son of the President of Brazil.

Calling themselves the "Ostriches," the Brazilian pilots were soon to



distinguish themselves on the Italian front in flying their P-47's or Thunderbolts on dangerous missions.

SEPTEMBER 16TH: Elements of the Brazilian Expeditionary Force, advancing on their second day at the Italian front, capture their first two towns. They made substantial gains, and captured many prisoners.

OCTOBER 10TH: The Brazilian Navy is to patrol the entire South Atlantic, according to Henrique Ariatides Gulhelm, Brazilian Minister of Marine. Hitherto the South Atlantic had been patrolled by forces of the United States and Brazil in collaboration, but the new measure was decided on to permit American warships to be transferred to the Pacific for the war against Japan.

## 1945

During the strenuous campaign in Italy, Brazilians fought side by side with General Mark Clark's men of the Fifth Army. Coping valiantly with mud, ice and snow, they gradually drove the Germans northward.

MAY 8TH: Germany surrenders unconditionally to the United Nations. Shortly afterwards, German generals commanding forces in Italy surrendered, bringing the war on the Italian front to an end.

General Mark Clark especially singled out the Brazilian Expeditionary Force for high commendation upon the final smashing of the German armies that had stood between the Allied forces and a clean sweep of all Italy.

In a special V-E Day message to President Getulio Vargas, President Harry S. Truman said that in their deep satisfaction over the unconditional surrender of the Nazi-Fascist hordes, "the American people are not forgetful of the valiant and effective contribution which the armed forces of Brazil, operating with United States forces in Italy, have made to the Allied victory over the common enemy in the vital theater of war. The armed forces of the United States take pride in their association with their Brazilian comrades-in-arms in the victorious and historic campaign."

President Vargas, in a recent press conference, stated the invaluable contributions Brazil made toward winning the European war, beginning immediately after the attack on Pearl Harbor when she broke diplomatic relations with Japan, followed by her declaration of war upon the European Axis August 22, 1942. Records show that between October 31, 1944 and January 22, 1945, the Brazilian First Fighter Squadron flew 897 sorties, raining destruction on enemy railroad cars, armored vehicles, bridges and ammunition and supply dumps.

Between April 16, 1944 and December 30, 1944, the BEF captured 6,000 German troops, 1,000 vehicles and 4,000 horses at a loss of 1,500 killed, wounded and missing Brazilians out of over 25,000.

Supporting Brazil's illustrious record in the field were her magnificent contributions to the United Nations in the use of her air and naval bases, and in the supply of strategic materials. Indeed, the United States invasion of North Africa was aided materially by the facilities supplied at the great base of Natal, and the bases of Recife and Belém.

Natal, for instance, grew and became the largest freight air-route junction in the world, as through it during the first half of 1944 passed 22,000,000 pounds of material from the remote corners of the globe, bound for the United States, Great Britain, Russia and the Far East.

As for Brazil's war supplies, the United States War Production Board states: "Without the Brazilian production of strategic materials, and the



bridge of planes bringing them to the United States, our war production of military needs would never have been anywhere near to schedule."

JUNE 6TH: Brazil declares war on Japan. As Frank M. Garcia, *Times* correspondent explained: "Brazil did not declare war on Japan before this because she felt it was not necessary, but took restrictive measures against Japanese subjects equal to those imposed on German and Italian subjects."

"When the European war ended Brazil considered that the United States would still need the use of northern Brazil bases. According to agreement, the bases would revert to Brazil 6 months after the end of the war, so a declaration of war against Japan was considered essential."

## II. THE BATTLE OF PRODUCTION

In order to cope with the needs of her own armed forces and those of the United Nations, Brazil has been speeding development to the utmost of her natural resources. The complete story may not be fully told now, for latest production figures are not available, but readers will observe trends from the statistics given and will conclude that within a very short time she has accomplished a miracle of advanced mechanization and industrialization.

### MINERAL PRODUCTS

In 1940 Brazil's mineral production was estimated at over \$11,000,000. In 1941 it soared to over \$25,000,000. Exports of minerals in 1940 amounted to 523,528 tons, valued at \$11,090,650. In 1941 exports amounted to 1,017,756 tons which came to a total of \$24,390,150.

Exports in 1942 rose to 738,882 tons, valued at \$27,563,792, and in 1943, to 784,891 tons, valued at \$38,547,515.

Product	Exports in Tons			
	1940	1941	1942	1943
Bauxite .....	82	14,365	12,397	76,761
Tantalite .....	27	90	113	—
Chromium Ore .....	4,572	4,424	5,776	—
Iron Ore .....	255,548	420,756	316,033	322,802
Manganese Ore .....	222,713	437,402	306,241	275,552

### Arsenic

Between 1937 and 1943 Brazil produced the following quantities of arsenic:

1937 .....	1,710,000 kilograms
1938 .....	1,178,000 kilograms
1939 .....	1,693,000 kilograms
1940 .....	2,720,000 kilograms
1941 .....	2,955,000 kilograms
1942 .....	899,000 kilograms
1943 .....	969,000 kilograms

Brazilian mines produced 477,468 kilograms of arsenic during the first six months of 1943, valued at 511,189 Cruzeiros. March was the record month, with a production of 111,053 kilograms.

There are three very large arsenic mines of which the most important is the St. John d'El Rey Mining Company in Morro Velho, whose production has recently been estimated as comprising 81% of the total. This company has the most modern machinery for the processing of arsenopyrite.



## Gold

Brazilian production of gold has also increased during the last several years. In 1933 production amounted to 3,658,520 grams, while in 1942 it was 4,885,672 grams. In 1943 it rose to 4,986,506 grams. During this ten-year period, only two mines were working continuously: the St. John d'El Rey Mining Company in Nova Lima, Minas Gerais, near the city of Belo Horizonte, and the Companhia Minas da Passagem, in Piranga, near Ouro Preto, Minas Gerais. The former company is estimated to have produced 87% of all the gold mined during this period.

## Silver

In the nine-year period from 1934 to 1943, Brazilian production of silver amounted to 7,707,357 grams. The most productive years were 1939, with 858,264 grams and 1942, with 800,393 grams.

During the first six months of 1943 production of silver amounted to 202,391 grams, valued at 44,526 Cruzeiros at the mouth of the mine. Total production during 1943 was 934,609 grams. Three companies were operating: the St. John d'El Rey Mining Company, the Companhia Minas da Passagem in the State of Minas Gerais and the Mina Timbutuva Sociedade Ltda., in Paraná. The Mina Timbutuva Sociedade Ltda. produced 9,425 grams of silver during the first half of 1943 and at the end of this period ceased operations. The St. John d'El Rey Company is the most productive mine, yielding in this six-month period some 187,891 grams. The Companhia Minas da Passagem made available about 4,000 grams during the first three months of the year.

## Tantalite

One of the new miracle metals which applied chemistry has made available is tantalum, a rare blue-white metal which is much stronger than steel, as acid resistant as glass, traditionally used for acid containers, and with a melting point of 5,100 degrees Fahrenheit. Though its uses are one of the carefully guarded secrets of the war, information has been released concerning its use in electronic tubes, in the process of making synthetic rubber and in the camera's eye. Moreover, it raises high hopes for the battle-scarred, as it knits bones and rejoins nerves miraculously.

Prior to the war, Brazil was listed as having unimportant sources of this beneficial metal. Brazilian and United States geologists have, however, discovered rich deposits of this metal in the bulge of Brazil and today, some 8,000 Brazilian laborers are making tantalite available to the United Nations. Indeed, Brazil is now furnishing well over half the supply of the United Nations, exceeding Australia and the Union of South Africa. The process is extremely difficult, since 3,000 tons of rock must be carefully worked by hand to produce one ton of tantalite. In 1940, 27 tons were exported and in 1941, slightly more than 90 tons. Exports in 1942 amounted to 113 tons.

## Coal

Production of anthracite coal, long retarded by transportation difficulties and the low cost of imported fuel, has increased over 350% in recent years. A government policy which has encouraged greater consumption of Brazilian coal has resulted in anthracite production jumping from 493,760 tons in 1931 to 2,034,311 tons in 1943.



Production for this period was as follows:

1931 .....	493,760 tons
1932 .....	542,773 tons
1933 .....	646,075 tons
1934 .....	730,622 tons
1935 .....	840,088 tons
1936 .....	622,196 tons
1937 .....	762,789 tons
1938 .....	908,975 tons
1939 .....	1,046,975 tons
1940 .....	1,336,301 tons
1941 .....	1,408,048 tons
1942 .....	1,757,021 tons
1943 .....	2,034,311 tons

The following figures show that Brazil is even now exporting small quantities of coal:

1940 .....	6,900 tons
1941 .....	61,434 tons
1942 .....	55,512 tons
1943 .....	57,276 tons
1944 .....	16,740 tons

### Cement

Cement production has also developed within the last ten years enabling Brazil to reduce her imports and increase her exports. From 1932 through 1943 she produced the following:

1932 .....	149,453 tons	1938 .....	617,896 tons
1933 .....	225,680 tons	1939 .....	697,793 tons
1934 .....	323,909 tons	1940 .....	743,635 tons
1935 .....	366,261 tons	1941 .....	767,506 tons
1936 .....	485,064 tons	1942 .....	752,839 tons
1937 .....	571,452 tons	1943 .....	747,409 tons

### Mineral Production and Exportation

Brazil has increased her output of ores and strategic minerals, trying to cover, as far as possible, the demands of the Allied Nations. The following statistical data for the year 1941 will confirm this statement:

	PRODUCED	EXPORTED
BAUXITE .....	14,365 tons	12,000 tons
CHROMIUM ORE .....	4,450 tons	4,424 tons
MANGANESE .....	449,671 tons	437,402 tons
IRON ORE .....	—	420,756 tons
RUTILE .....	2,369 tons	2,369 tons
ZIRCONIUM .....	4,735 tons	4,375 tons
MICA .....	1,170,293 kgs.	867,068 kgs.
QUARTZ .....	—	2,000 tons

According to United States Department of Commerce statistics, Brazilian exports to the United States in 1942 amounted to \$165,214,866. Of this total \$43,810,472 were for strategic and critical materials and \$121,404,394 for non-strategic and non-critical materials.



## INDUSTRIAL AGRICULTURAL PRODUCTS

Brazil's mineral resources and cattle-raising industry, together with her expanding industrial development, have turned her productive energy toward new fields of endeavor so that she is no longer a purely agricultural country. The products of her soil continue to be important factors in Brazilian economy and demands for certain industrial agricultural products such as babassú nuts, oiticica kernels and rubber in particular, have soared as inventories at home and abroad become depleted. Statistics for 1942 are slightly higher in volume than those of 1941.

<i>Production Value</i>		
1940 .....	273,631 tons	\$22,854,850
1941 .....	265,457 tons	\$32,189,950
1942 .....	266,995 tons	\$36,454,449

### Babassu Nuts

The output of these nuts totaled 68,162 tons in 1940, 72,365 tons in 1941, and 56,786 tons in 1942. Of the 1941 production Brazil exported 39,267 tons. In 1942, 29,343 tons of babassú nuts and 657 tons of babassú oil were exported. 21,747 tons of babassú nuts were exported in 1943, dropping to 6,780 tons in 1944.

### Carnauba Wax

Brazil is the sole producer of this wax, universally recognized as the finest in the world. Production amounted to 9,892 tons in 1940, 11,326 in 1941 and 8,851 in 1942. Practically the entire output was exported. In 1942, exports amounted to 8,509 tons; in 1943, 9,046 tons; and in 1944, 11,130 tons.

### Uricuri Wax

In 1940, 1,200 tons of this wax were produced. In 1941 volume increased to 2,350 tons, and in 1942 to 2,473 tons. Exports for 1940 amounted to 990 tons, increasing to 2,186 in 1941. Exports rose even higher in 1942 to 2,391 tons, but dropped in 1943 to 1,595 tons, and in 1944 to 1,590 tons.

### Oiticica

The production of oiticica oil in 1941 was greater than that of 1940. Exports for these and ensuing years were as follows: 1940, 7,235 tons; 1941, 16,606 tons; 1942, 1,075 tons; 1943, 976 tons; and 1944, 6,394 tons.

### Rubber

According to a recent release of the Statistics Division of the Brazilian Ministry of Finance, rubber production in the first six months of 1943 kept well apace of planned production. The export statistics which were published gave good indication of the recent increase in output. Shipments abroad in the year 1942 amounted to 55% of total production.

Statistics on rubber for the years 1938-1944, together with production quotas set for 1944 through 1946, are given below:

<i>Year</i>	<i>Production Tons</i>	<i>Consumption Tons</i>	<i>Export Tons</i>
1938 .....	16,438	4,374	12,064
1939 .....	16,428	4,623	11,805
1940 .....	18,635	6,800	11,835
1941 .....	19,408	8,674	10,734
1942 .....	21,697	9,597	12,100
1943 .....	32,000	17,425	14,575
1944 .....	—	—	21,192



### *Value of Brazilian Rubber Production (Estimated)*

<i>Year</i>	<i>Tons</i>	<i>Value in American Dollars</i>
1944 .....	40,000	\$27,883,650
1945 .....	50,000	\$34,850,550
1946 .....	60,000	\$41,825,450

**TIRES**—In 1943, Brazil exported 6,644 tons of tires with a value of 146,037,000 Cruzeiros. The United States purchased approximately 50% of this total, i.e., 2,627 tons. The balance was purchased by 11 other countries as follows:

Colombia .....	806 tons
Peru .....	622 tons
Chile .....	492 tons
Venezuela .....	225 tons
Ecuador .....	191 tons
Bolivia .....	173 tons
Paraguay .....	55 tons
Argentina .....	8 tons
French Guiana .....	1 ton
Dutch Guiana .....	0.5 ton
Union of South Africa.....	90 kgs.

In 1944, Brazil exported 5,020 tons of tires.

### **Menthol**

There are sixty-one distilleries registered by the Department of Agriculture of the State of São Paulo for the production of mint oil, 90 percent of them located in the municipality of Presidente Bernardes, in the Alta Sorocabana region. The oil produced yielded from 75 percent to 80 percent menthol, with the 1942-43 crop yield at 80 metric tons and the production of crystals between 40,000 and 50,000 pounds of U.S.P. menthol crystals.

In 1943 production totaled 350 metric tons, yielding from 385,700 to 440,800 pounds of crystals.

Early in 1944 reports indicated that 15,000 acres, with an average yield of 24 kilos per acre, had been set aside for planting peppermint in the State of São Paulo. This acreage was seven times greater than for the preceding year. At the beginning of 1944 an area of from 160 to 300 acres in Northern Paraná was reported to have been planted to mint. The yield in that state was expected to be slightly higher per acre than in São Paulo.

### **Cotton Linters**

Brazil exported 39,873 tons of linters in 1940; 68,583 tons in 1941; 39,450 tons in 1942, and 31,492 tons in 1943.

### **Oil-Bearing Fruits**

Total export figures for oleaginous fruits from 1940 to 1944 were as follows:

1940 .....	204,284 tons
1941 .....	281,370 tons
1942 .....	156,493 tons
1943 .....	201,367 tons
1944 .....	155,307 tons



### **Vegetable Oils**

Exports exceeded 35,702 tons in 1940, and amounted to 55,159 tons in 1941, 22,960 tons in 1942, 24,063 tons in 1943 and 24,668 tons in 1944.

### **Essential Oils, Resins and Balsams**

Brazilian exports exceeded 17 tons in 1940 and 78 tons in 1941. Exports of rosewood oil increased from 196 tons in 1940 to 275 tons in 1941. They fell to 153 tons in 1942, none in 1943, but reached a peak of 306 tons in 1944.

### **Lumber**

Brazil exported 291,121 tons of timber in 1940, 77.4% of which was pine. Exports rose to 343,359 tons in 1941, 85.5% of which was pine, further increasing to 366,065 tons in 1942 and dropping to 320,611 tons in 1943. However, the value was 16% greater. During the first five months of 1942 pine exports amounted to 154,370 tons. The Brazilian National Pine Institute reports that during 1943 Brazil exported 196,498,800 square feet of pine, 91% of which went to the other American republics and the balance to South Africa and England. The State of Rio Grande do Sul was the largest exporter, having shipped 46%, Santa Catarina shipped 31% and Paraná 22%.

### **Fibers**

Exports of tucum, caroá and milkweed fibers rose during 1940 and 1941. There was a small decrease in the exportation of piassava (about 200 tons) during 1940, but in 1941 exports of this product rose again to 3,572 tons. In 1942 exports totaled 4,355 tons; in 1943, 3,254 tons; and in 1944, 3,612 tons.

## **AGRICULTURAL PRODUCTION**

The Brazilian Government is utilizing every possible method to perfect agricultural production by encouraging technical study of agriculture, providing for the specialized training of Brazilian agronomists abroad, and inviting foreign experts to Brazil. There are now in operation hundreds of public units for the purpose of advising and instructing farmers, also numerous experimental stations and promotion centers, the best equipped and most famous being "Kilometer 47" which was inaugurated early in 1945. Already the following products are under a system of standardized supervision maintained by the government: avocados, pineapple, bird food, peanuts, rice, oats, "nanica" (tiny bananas), bananas, potatoes, cocoa, Brazil nuts, onions, rye, barley, coconuts, black tea, chipped beef, cumarú oil, maté, peas, manioc flour, beans, citrus fruits, ginger, guaraná (native soft drink), lentils, honey, corn, "nespera," sapotí (native fruit), wheat, etc.

The policy of crop preservation adopted by the administration has produced excellent results. The development of cooperative enterprises and the promotion of agricultural credits have all contributed toward the progress of Brazilian agriculture.

The following table shows the increasing volume and value of Brazilian agricultural production from 1931 to 1940:



<i>Years</i>	<i>Volume in 1,000's of Tons</i>	<i>Value in Millions of Cruzeiros</i>	<i>Average Price per Ton in Cruzeiros</i>
1931 . . . . .	40,162	7,587	189
1932 . . . . .	40,098	8,371	209
1933 . . . . .	41,748	9,698	232
1934 . . . . .	44,524	11,089	249
1935 . . . . .	43,879	11,841	270
1936 . . . . .	46,529	13,274	285
1937 . . . . .	44,205	13,898	314
1938 . . . . .	47,424	14,722	310
1939 . . . . .	51,923	14,919	287
1940 . . . . .	54,870	15,702	286

### Cotton

During 1944, Brazil exported 107,640 tons of raw cotton, valued at \$33,397,050, as compared with 77,962 tons valued at \$20,688,850 in 1943. Exports of cotton piece goods in 1944 amounted to \$52,309,500 as compared with \$55,212,300 in the previous year. Though this figure represents a decline in output, it nevertheless emphasizes the importance of the textile industry in modern Brazil. Cotton yarn exports rose from \$4,376,850 in 1943 to \$6,167,900 in 1944.

According to an announcement by the Combined Production and Resources Board, Brazil has agreed to increase its cotton fabric exports by some 300,000,000 yards for a yearly period starting April, 1945. The new export allotment is in addition to Brazil's previous commitments to ship about 200,000,000 yards of fabric in 1945. 90,000,000 yards have been contracted for by the United Nations Relief and Rehabilitation Administration, as part of Brazil's national contribution to that organization. Various commercial markets will receive about 60,000,000.

The new agreement, negotiated at Rio de Janeiro, between C.P.R.B.'s textile committee and the Comissão Executiva Textil of Brasil, also provides for 80,000,000 yards to be purchased governmentally for the liberated areas, principally in the Far East.

### Rye and Barley

Rye production rose from 14,236,710 kgs. in 1941 to 15,862,000 in 1942. Barley, on the other hand, dropped from 15,848,440 in 1941 to 15,565,520 kgs. in 1942.

### Rice

Brazil's 1944 rice crop amounted to 1,790,000 metric tons, according to estimates. This figure is higher than the annual average of 1,528,874 metric tons for the five-year period from 1938 through 1942. Nevertheless the crop in 1944 was in line with the high levels of 1942 and 1943 when production totaled 1,902,638 and 1,820,000 metric tons respectively. Production in Rio Grande do Sul in 1944 was heavier than in the two preceding years. In 1943 this State produced 420,000 metric tons as compared with 270,000 in 1939.

### Corn

Output of corn was estimated at 89,892,548 bags of 60 kgs. in 1939; 90,712,500 bags in 1940; 93,324,708 bags in 1941 and 91,933,286 bags in 1942.



## Manioc

Total manioc production for 1940 was 7,641,620 tons; for 1941, 7,762,561 tons, and for 1942, 8,575,486 tons. There was an increase in 1940 in the manufacture of flour made from manioc roots, the total reaching 18,357,400 bags of 60 kgs. each. Exports of manioc starch in 1940 amounted to 9,319 tons and 9,840 tons in 1941. Exports of tapioca were 211,806 kgs. in 1940; 1,117,388 kgs. in 1941, and 1,670,073 kgs. in 1942.

## Black Beans

In 1939 the production of beans totaled 13,162,030 bags of 60 kgs. increasing to 14,131,000 bags in 1940; 14,581,612 bags in 1941; and 14,914,774 bags in 1942.

## Castor Beans

Brazil produced 117,335 tons of castor beans in 1939; 131,291 tons in 1940; 176,811 tons in 1941; and 147,534 tons in 1942. Exports of castor beans amounted to 117,495 tons in 1940; 221,813 tons in 1941; 116,169 tons in 1942; 155,685 tons in 1943, and 145,477 tons in 1944.

## Sugar Cane

Sugar cane production in 1941 was 21,463,054 tons and in 1942, 21,518,564 tons.

Over 14,400,000 bags of sugar were produced in the 1942-43 agricultural year. This great crop, which was largely the result of favorable climatic conditions and an increased domestic demand, accounted for an annual production of 869,000,000 kilograms (60 kgs. to the bag), an output of 20 kilograms per capita.

Chief producers were the States of Pernambuco, São Paulo, Rio de Janeiro. Others were Alagoas, Baía, Sergipe, Minas Gerais and Paraíba.

### Sugar Production by States in 1942-43

<i>State</i>	<i>Bags</i>	<i>Percentage of Total Production</i>
Pernambuco .....	5,073,842	35.0
São Paulo .....	2,926,968	20.2
Rio de Janeiro .....	2,541,756	17.5
Alagoas .....	1,455,824	10.0
Baía .....	857,079	5.9
Sergipe .....	774,750	5.4
Minas Gerais .....	514,623	3.6
Paraíba .....	353,520	2.4
Total.....	14,498,362	100.0

According to data released by the Brazilian National Institute of Sugar and Alcohol, production of sugar for the year 1944-45 was 22,500,000 bags of 60 kilograms each. The largest producing centers were the States of Pernambuco (7,029,210 bags), São Paulo (3,292,652 bags), and Rio de Janeiro (2,444,258 bags). Other States in which production exceeded 1,000,000 bags were Alagoas (2,298,324 bags) and Baía (1,198,951 bags).

Alcohol production in 1943-44 reached a total of 75,231,859 liters.



## Wheat

Long an importer of wheat grain and flour, Brazil has boosted her national production of wheat approximately 90 percent in recent years, reducing her dependence upon imports by about 9 percent. Production, encouraged by government policy, jumped from 96,425,270 kilograms in 1939, to 180,449,000 kilograms in 1941. It reached a new high in 1942 with 248,371,590 kilograms. Imports of wheat grain, though increasing in value, fell in volume during 1941 from 966,847 tons to 894,905, and rose again in 1942 to 945,733 tons, and in 1943 to 1,042,601 tons. Flour imports, declining even more sharply, decreased from 33,766 tons to 17,986.

### Wheat Production (1939-41, in Kilograms)

<i>States</i>	<i>1939</i>	<i>1940</i>	<i>1941</i>
Pernambuco .....	40,000	14,300	—
Baía .....	10,000	—	—
Espírito Santo .....	23,000	100,000	—
São Paulo .....	—	850,000	1,287,000
Paraná .....	20,000,000	20,000,000	24,000,000
Santa Catarina .....	11,642,000	18,500,000	35,000,000
Rio Grande do Sul.....	64,455,000	93,430,000	120,000,000
Mato Grosso .....	1,000	2,600	32,400
Goiás .....	4,270	—	—
Minas Gerais .....	250,000	140,000	130,000
Total.....	96,425,270	133,036,900	180,449,400

## Cocoa

Cocoa produced in Brazil was slightly higher in 1939 than it was in 1940. The 1941 output, however, was the largest, amounting to 2,205,091 bags of 60 kgs. each. In that year, exports amounted to 132,943 tons, as compared with those in 1940 of 106,790 tons. In 1942 production amounted to 1,977,650 bags of 60 kgs. each, and exports were 71,904 tons. In 1943 production increased slightly to 1,998,887 bags.

Total exports for 1943 amounted to 115,120 tons. The principal purchaser was the United States, which accounted for 1,838,452 bags of 60 kgs. each. Exports in 1944 amounted to 101,920 tons, a decrease of 13,200 tons as compared with the previous year.

## Mate

Maté is one of the Brazilian products constantly rising in production. From 83,815 tons in 1940, production rose to 84,474 tons in 1941. Exports increased from 53,447 tons in 1940 to 57,960 tons in 1941. However, they declined slightly in 1942 to 55,276 tons and in 1943 to 48,139 tons. They increased in 1944 to 48,692 tons. Some 100,000,000 persons are estimated to be regular users of maté in Central and South America. The average annual consumption is about 200,000 tons.

## Coffee

Through the "Departamento Nacional do Café" (National Coffee Department), Brazil now has a perfect system of internal control for coffee production. This Department is affiliated with the Pan American Coffee Bureau, the presidency of which is held by Brazil's representative. During 1939 and 1940, coffee production declined slightly, as did coffee exports. Nevertheless, the figure has remained very high: 11,052,484 bags during



1941. In this year, of the 17,037,405 bags imported by the United States, 9,930,970 bags came from Brazil. During the entire year of 1943, 10,115,969 bags were exported, and in 1944, 13,555,484 bags.

### **Tobacco**

Brazilian production of tobacco amounted to 95,998,160 kgs. in 1939; 98,295,000 kgs. in 1940; 420,362,800 kgs. in 1941, but declined to 87,727,200 kgs. in 1942. Exports of leaf tobacco increased from 15,720 tons in 1940 to 17,851 tons in 1941. National exports of tobacco during 1944 rose to 29,867 tons as compared with 17,105 tons in 1943.

The tobacco crop of Baía, Brazil's largest producer, is estimated at 23,868,184 kgs. in 1944-45 as compared with 19,500,000 kgs. for the 1943-44 period. Exports of Baía leaf totaled 243,698 bales of 75 kgs. each in 1942 and 204,947 bales in 1943. During the first 10 months of 1944, exports from this State totaled 321,476 bales, compared with 183,726 bales for the corresponding period of 1943.

### **Fruits**

Brazil's orange crop for the year 1940 amounted to 35,922,600 cases; in 1941, 36,078,630 cases, and in 1942, 35,578,547 cases. Production of other citrus fruits has also been high, increases being especially noticeable in grapefruit and lemon exports. Banana production amounted to 80,000,000 bunches in 1938; 91,000,000 in 1940; 80,980,943 in 1941, and 76,762,473 in 1942. Pineapple production was as follows: 88,710,221 fruits in 1938; 92,452,000 in 1940; 85,760,040 in 1941, and 83,431,510 in 1942.

## **ANIMAL PRODUCTS**

Cattle raising is one of the most important industries in the Brazilian economic system, and the war emergency has caused the administration to promote, by every means possible, the activities of those engaged in it. The following figures show the number of cattle in Brazil:

1938	.....	40,076,114 head
1939	.....	40,564,839 head

Brazil is endeavoring to improve her breeds of cattle, by utilizing such modern scientific methods as strict sanitary control to combat disease and the importation of selected stock for reproduction purposes.

In 1939 the total number of cattle slaughtered was 4,262,811; in 1940, 4,548,801, and in 1942, 4,920,374. Slaughterhouse, or frigorífico, figures for 1944 were 933,240 head as compared with 1,333,892 in 1943.

The figures for 1939 on the number of all livestock slaughtered are 9,018,076, and in 1940, 9,007,989.

Exports of preserved beef increased from 48,126 tons in 1940 to 64,228 tons in 1941, dropping to 41,198 tons in 1943 and 25,805 tons in 1944. Exports of other preserved meats rose from 8,435 tons in 1943 to 15,860 tons in 1944. Exports of frozen meat decreased from 16,821 tons in 1943 to 9,306 tons in 1944.

### **Hides and Skins**

Brazilian exports of hides and skins amounted to 51,417 tons in 1940; 58,994 tons in 1941; 60,663 tons in 1942; 38,109 tons in 1943; and 24,253 tons in 1944.



## **Dairy Products**

Production of dairy products (milk, cheese and butter) for 1942 was 180,553,894 kgs. as compared with 189,467,287 for 1941, and 180,553,894 in 1940.

## **Eggs**

Poultry farming in Brazil has made rapid progress with the adoption of new methods and processes in selecting breeds, balanced rations and prophylaxis measures. Various aviculture societies have also been encouraging the raising of chickens by means of shows, competitions, etc. Egg production figures for 1940 were 96 tons and 94 tons in 1941. It is now proposed to industrialize the production of eggs entirely, setting up plants equipped to export them in various forms, which will be another great stimulus to aviculture.

## **Beeswax**

In 1940, 743 tons of honey and beeswax were exported, rising to 873 tons in 1941. Exports declined in 1942 to 506 tons, then rose to 702 tons in 1943 and dropped slightly in 1944 to 617 tons.

## **Fish**

Brazil eats more fish than any other Latin American nation. Average annual consumption is 102,641,000 pounds, as compared with 76,446,000 pounds in Argentina, the next largest consumer. Commercial fishing centers around certain large ports and inland river cities. Brazil's four major fishing areas are: Amazon Region; Northeastern or "Bulge" Region; Rio de Janeiro Area; and Rio Grande do Sul Area.

Prior to 1943 the Brazilian fishing industry was principally for local consumption. On April 14, 1943, fishing came under the control of the Federal Government and the Comissão Executiva da Pesca (C.E.P.) was set up. This Commission has full control over fishing activities and its distribution. In one year the C.E.P. increased production and lowered the selling price of fish by 50 centavos per kilogram.

The São Paulo fishing industry has more than doubled its catch in the past year. The average catch of fish formerly amounted to about 3,000,000 kilograms a year, whereas in the period from July 1, 1943, to June 30, 1944, the total reached 8,916,384 kilograms.

## **III. BRAZIL'S INDUSTRIAL PRODUCTION**

Rapid transformation of Brazil from an agricultural to an industrial nation was noted recently by Dr. Alexandre Marcondes Filho, former Minister of Labor, Industry and Commerce.

Reviewing the changes which have taken place in Brazil during the past decade, Dr. Filho stressed the evolution of the country from a one-crop economy to a producer of sugar, rubber, coffee, cotton and other articles. He then recalled how, in 1931, President Vargas declared that the future of the country depends on intensive development of the iron and steel industries.

Though Brazil cannot today be called an industrial nation, that goal is nearer than ever before in its history. Thirty years ago only 30 percent of the country's production was industrial, and 70 percent was agricultural.



Today, its industrial output accounts for 60 percent of the total, with agriculture contributing 40 percent.

Industrial production in 1937 amounted to eight billion cruzeiros (400 million dollars). In 1940 it rose to twelve billion, or 600 million dollars, and by 1943 it had passed the 27 billion mark, or 1,350 million dollars.

Recent statistics show that in 1942 there were 80,633 factories in Brazil, representing an increase of about 15 percent over 1941 in manufacturing establishments.

1942	
<i>States</i>	<i>Number of Factories</i>
São Paulo .....	30,389
Federal District .....	10,267
Minas Gerais .....	8,844
Rio Grande do Sul.....	7,575
Rio de Janeiro.....	4,206
Santa Catarina .....	3,419
Pernambuco .....	3,050
Paraná .....	2,741
Baía .....	2,545
Ceará .....	1,068
Pará .....	952
Alagoas .....	926
Sergipe .....	878
Paraíba .....	860
Espírito Santo .....	779
Maranhão .....	409
Rio Grande do Norte.....	405
Goiás .....	401
Mato Grosso .....	370
Amazonas .....	303
Piauí .....	246
Total.....	80,633

Below are figures showing number of workers, value of production and production value per capita by State from 1907 to 1942:

<i>Years</i>	<i>Number of Workers</i>	<i>Value of Production</i>	<i>Production per Capita</i>
1907 .....	136,420	\$ 37,077	\$ 272
1920 .....	275,512	144,909	526
1930 .....	500,000	295,341	591
1933 .....	790,000	297,652	377
1936 .....	971,000	481,754	497
1937 .....	535,880	561,730	1,048
1938 .....	950,000	600,000	632
1939 .....	1,112,162	750,000	674
1940 .....	1,412,432	850,000	602
1941 .....	1,400,000	1,000,000	714
1942 .....	1,311,007	1,100,000	839



Also given below are the number of factories in each state capital and the percentage of the total that each figure represents:

<i>Capitals</i>	<i>Number</i>	<i>Percentage</i>
São Paulo .....	11,364	34.7
Federal District .....	11,324	34.6
Recife .....	1,907	5.8
Porto Alegre .....	1,456	4.4
Salvador .....	1,097	3.3
Belo Horizonte .....	1,053	3.2
Curitiba .....	796	2.4
Niterói-São Gonçalo .....	589	1.8
Maceió .....	450	1.4
Belem .....	434	1.3
Vitória .....	346	1.1
Fortaleza .....	307	0.9
Manáus .....	276	0.8
Natal .....	262	0.8
Aracajú .....	222	0.7
João Pessoa .....	200	0.6
Florianópolis .....	184	0.6
São Luiz .....	162	0.5
Teresina .....	153	0.5
Cuiabá .....	72	0.2
Goiana .....	53	0.2
Rio Branco .....	48	0.2
Total.....	32,755	100.0

Statistics recently made public reveal that Brazilian industrial production subject to the Federal Sales Tax has increased considerably from year to year, 1941 production being almost twice that of 1937. The distribution of this production (excluding only the national production of salt) is shown below. All figures represent one thousand cruzeiros, roughly equivalent to fifty American dollars.



<i>States</i>	<i>1937</i>	<i>1938</i>	<i>1939</i>	<i>1940</i>	<i>1941</i>
Acre and Amazonas	10,989	11,110	15,387	17,661	23,084
Pará	40,387	47,586	62,887	61,414	85,232
Maranhão	21,179	24,606	37,548	32,996	77,227
Piauí	4,176	3,384	5,145	5,636	9,913
Ceará	29,734	35,239	48,038	70,004	95,489
Rio Grande do Norte	4,014	6,608	11,131	11,665	13,134
Paraíba	47,011	55,974	64,461	77,363	130,831
Pernambuco	318,494	376,144	673,177	483,261	577,283
Alagoas	50,495	55,076	69,565	67,469	131,552
Sergipe	45,908	53,211	61,223	59,122	144,601
Baía	117,247	116,702	148,723	156,858	278,451
Minas Gerais	518,290	590,081	786,907	943,286	1,296,013
Espírito Santo	9,076	14,635	20,978	25,921	29,306
Rio de Janeiro	464,060	486,452	591,323	626,175	890,233
Federal District	1,535,013	1,784,929	1,977,780	2,047,455	2,679,379
São Paulo	4,200,561	5,367,246	6,037,636	6,237,943	6,979,823
Paraná	82,157	128,369	164,268	181,376	251,807
Santa Catarina	134,650	191,162	212,622	254,060	336,254
Rio Grande do Sul	590,324	951,536	1,054,922	1,048,339	1,252,555
Goiaz	6,201	—	—	8,864	16,258
Mato Grosso	5,202	7,038	11,042	11,357	13,230
Total	8,235,168	10,307,088	12,054,763	12,428,225	15,311,655

Brazilian industrial exports, which represented a mere 2.4 percent of all Brazilian foreign trade during the first six months of 1940, jumped over 900 percent in the first six months of 1943 to aggregate 22.6 percent of Brazil's foreign commerce. The startling rise in exports of manufactured goods took place in a period during which total exports fell no more than twelve and a half percent under the 1940 total, and this in face of the problems created by wartime shipping.

### INDUSTRIAL PRODUCTION OF BRAZIL (1940)

<i>Products</i>	<i>Number of Factories</i>	<i>Units</i>	<i>Production</i>
<i>Tobacco</i>	366		
Brazilian cigars		units	180,060,315
Cigarettes		twenties	795,379,157
Snuff tobacco		kgs.	26,048
Shredded tobacco		kgs.	1,629,652
<i>Beverages</i>	13,239		
Natural mineral waters		bottles	21,522,050
Artificial mineral waters		liters	37,861,150
Same		½ liters	38,542
Same		bottles	1,421,383



# INDUSTRIAL PRODUCTION OF BRAZIL—*Continued*

<i>Products</i>	<i>Number of Factories</i>	<i>Units</i>	<i>Production</i>
Same		½ bottles	1,065,729
Hydrolytic products		kgs.	20,433
Brandies, up to 54°		liters	108,473,873
Same		bottles	1,497,551
Brandies of any grading		liters	1,877,040
Bitters, cocktails, etc.		liters	6,797,413
Same		½ liters	15,890
Same		bottles	13,086
Beverages obtained through the alcoholic fermentation of fruit juices		liters	2,365,274
Same		bottles	153,878
Beverages from artificial fermentation		liters	807,672
Same		bottles	28,220
Beer, in bottles and on tap		liters	206,309,080
Fruit juices containing up to 1% alcohol		liters	153,068
Wines		liters	65,280,259
Wines with alcoholic content up to 18%		liters	3,494,635
Same		bottles	4,767
Compound wines		liters	105,686
Same		bottles	2,996
Natural sparkling wines		liters	169,466
Same		bottles	3,980
Artificial sparkling wines		liters	4,000
<i>Alcohol</i>	237		
Alcohol from grapes, sugar cane and manioc		liters	46,536,719
<i>Matches and Lighters</i>	29		
Wooden, wax or any other kind of matches		boxes	671,288,582
Metals, metalloids and flints		units	11,778,500
Lighters		units	468,859
<i>Salt</i>	1,447		
Rough or impure salt; refined, ground or improved		kgs.	228,503,401
<i>Shoes</i>	7,547		
All kinds, types, or shapes		pairs	44,799,722
<i>Toiletries and Beauty Preparations</i>	1,182		
Perfumes		bottles	7,170,785
Cologne, cinchona or rose toilet water		bottles	8,971,092
Makeup and beautifying liquids		bottles	5,155,505
Hair tonics and dyes (unscented)		bottles	2,835,363
Face powder (scented)		kgs.	74,724
Same		boxes	8,361,310
Rice and soap powders for use in barber shops		kgs.	73,408



## INDUSTRIAL PRODUCTION OF BRAZIL—*Continued*

<i>Products</i>	<i>Number of Factories</i>	<i>Units</i>	<i>Production</i>
Non-scented talcum powder		kgs.	2,151,447
Same		boxes	6,674
Same		cans	9,389
Scented talcum powder		kgs.	3,824,954
Same		boxes	302,677
Same		cans	145,927
Liquid rouge and lipsticks		bottles	11,335,396
Solid rouge and lipsticks		boxes	2,507,297
Brilliantines and hair lacquers		cans	2,548,519
Same		boxes	98,248
Same		bottles	3,527,113
Scented oils and liquid brilliantine		bottles	11,315,078
Creams and pomades		jars	684,964
Same		cans	490,640
Scented soap, in bars and cakes		units	48,107,831
Non-scented soap, in bars and cakes		units	22,200,095
Liquid soap, scented and unscented		bottles	2,978,744
Dental creams and pastes		tubes	15,462,923
Liquid dentifrices		bottles	1,231,353
Bath crystals and tablets		kgs.	1,104,653
Spray perfume bottles		units	985,300
Essences and oils to be used as raw material for the perfume industry		bottles	135,700
Ammonia for the perfume industry		bottles	248,214
<i>Pharmaceuticals</i>	1,437		
Pills, capsules, etc.		units	102,316,790
Same		boxes	828,931
Same		bottles	8,930,167
Tablets, capsules, etc.		unit	890,263
Same		bottles	5,536,873
Vaginal and rectal suppositories		unit	1,100
Same		boxes	806,444
Chemically treated paper, medicated cigarettes, poultices		unit	791,789
Same		boxes	2,068
Medicated oils, urethral injections, elixirs, cough syrups		unit	4,732,468
Same		boxes	124,593
Same		bottles	5,164,038
All kinds of drops		bottles	5,724,054
All liquids for subcutaneous, intramuscular and intravenous injections		unit	328,401
Same		boxes	7,172,768
Solid substances for injections		boxes	10,527,650
Pomades, pastes and medicated creams		boxes	9,175,582
Same		cans	484,134



## INDUSTRIAL PRODUCTION OF BRAZIL—*Continued*

<i>Products</i>	<i>Number of Factories</i>	<i>Units</i>	<i>Production</i>
Seeds, granulated substances and saccharoids		boxes	3,293,378
Same		bottles	28,573
Medicated flour and biscuits		unit	77,063
Same		bottles	90,787
Same		cans	908,187
Hydrogen peroxide, liquid magnesia, etc.		bottles	667,227
Same, in smaller		bottles	8,527,593
Poultices, bandages and the like		unit	540
Same		kgs.	136,501
Same		boxes	1,552
Same		bottles	2,577
All kinds of plasters for callouses, corns, etc.		unit	6,608
Same		boxes	437,937
Gauze and absorbent cotton		boxes	256,345
Same		kgs.	1,356,247
<i>Preserves</i>	1,718		
Canned meat and fish		kgs.	31,061,783
Mustard, pepper, cinnamon and yeast in powder form		kgs.	6,033,724
Fruits and vegetables		kgs.	6,094,712
Sweets of all kinds, prepared as compotes, pastes or jellies		kgs.	20,132,097
Compound flours, condensed milk, etc.		kgs.	1,849,194
Biscuits and crackers		kgs.	6,616,195
Chocolate made purely of cocoa and sugar		kgs.	4,834,795
Chocolate of any other kind or quality		kgs.	3,416,296
Candy, caramel and gum		kgs.	17,131,562
"Marron-Glacé" and other fine candies		kgs.	71,174
<i>Vinegar, Cooking Oils, Etc.</i>	1,252		
Vinegar for domestic use		liters	32,940,821
Same		bottles	509,343
Same		$\frac{1}{2}$ bottles	4,414,450
Industrial vinegar		liters	351,071
Olive oil, and other edible oils		liters	35,657,962
<i>Candles</i>	119		
Made of tallow or other similar substances		kgs.	1,624,350
Made of stearin, spermaceti and paraffin		kgs.	4,118,427
Made of animal or vegetable wax		kgs.	445,324
Made of any other substance, in colors and ornamented		kgs.	46,077



## INDUSTRIAL PRODUCTION OF BRAZIL—Continued

<i>Products</i>	<i>Number of Factories</i>	<i>Units</i>	<i>Production</i>
<i>Textiles</i>	962		
Cotton textiles		meters	822,670,943
Textiles made from hemp, jute or other fibers		meters	34,497,939
Pure linen, or mixed linen and silk textiles		meters	9,574,152
Linen textiles, mixed with cotton or other products		meters	16,395,921
Woolen textiles, mixed with cotton and other products		meters	8,232,899
Pure silk textiles		meters	51,429,589
Same		kgs.	5,618
Brocades, metallic fabrics, etc		meters	9,489
Same		kgs.	24,715
Veilings, metallic fabrics, sequins, etc.		kgs.	17,454
Carpets and stair carpeting		meters	1,214,427
Same		kgs.	30,818
Waterproof textiles, containing or coated with rubber		meters	656,932
Interlining		meters	1,600,464
<i>Textiles and Fur-made Goods</i>	3,360		
Blankets, quilts, sheets, shawls, plaids		unit	28,829,753
Pillowcases, napkins, etc.		unit	4,996,701
Bath towels		unit	8,386,369
Curtains, mosquito nets, etc.		unit	217,286
Doilies		unit	1,286,137
Carpets and door mats		sq. meters	162,216
Saddle-blankets, etc.		unit	394,825
Nightgowns, slips, brassieres		unit	6,803,465
Pajamas, robes and house coats		unit	7,105,948
Collars		unit	834,510
Handkerchiefs		unit	21,383,150
Neckties		unit	4,019,301
Girdles, corsets, belts, etc.		unit	190,068
Stockings and socks		unit	136,329,280
Overcoats, capes, etc.		unit	316,505
Knitted goods		unit	4,190,826
Machine-made lace		kgs.	153,828
Ribbons, straps, braids, trimmings		kgs.	843,162
Cotton, hemp or other fiber-made bags		unit	67,726,993
Gloves		pairs	123,922
Garters, suspenders and belts		unit	824,429
Same		pairs	272,440
Fur scarfs, collars, etc.		unit	230,367
Same		meters	51,200



# INDUSTRIAL PRODUCTION OF BRAZIL—*Continued*

<i>Products</i>	<i>Number of Factories</i>	<i>Units</i>	<i>Production</i>
<i>Paper and Paper Articles</i>	553		
Paper, cardboard, etc.		kgs.	116,090,215
Same		rolls	165,734
Same		reams	5,491
Paper articles		unit	6,846,497
Same		kgs.	10,839,875
Same		rolls	155,410
Same		reams	4,855,759
Paper articles		folders	28,434
Same		covers	40,368
<i>Playing Cards</i>	7		
Decks with 53 cards or less		unit	1,257,008
<i>Hats, Canes, Umbrellas</i>	1,446		
Umbrellas, sunshades		unit	2,209,876
Men's and boys' hats		unit	4,665,053
Women's and girls' hats		unit	509,610
Caps		unit	972,726
Walking sticks and canes		unit	29,630
<i>Pottery and Glassware</i>	220		
Complete sets and pieces for domestic use, table or kitchen		kgs.	17,779,728
Sets and ornament pieces		kgs.	369,726
Glass bottles and jars for solid or liquid products		kgs.	46,181,648
Casseroles, bottles and jars		unit	7,200
Sanitary equipment and parts		kgs.	3,890,799
<i>Hardware</i>	1,683		
Tools in general		kgs.	43,664,314
Ornamental objects		kgs.	1,958,700
Purely ornamental objects		kgs.	105,945
Knives, spoons, forks, soup spoons, etc.		kgs.	231,456
Portable scales		kgs.	165,062
<i>Toasted and Ground Coffee and Tea</i>	4,467		
Toasted coffee		kgs.	36,754,396
Ground coffee		kgs.	34,926,895
Tea, in boxes, cans, or tablets		kgs.	747,095
<i>Butter, Lard and By-Products</i>	3,302		
Pork lard and coconut fat		kgs.	37,147,553
Butter, margarine and other fats used in cooking		kgs.	34,948,436
<i>Furniture</i>	5,560		
Wooden, reed, steel, straw, etc.		unit	11,336,799
Lamp shades, whatnots, etc.		unit	95,881
Typewriters and cash registers, etc.		unit	887



## INDUSTRIAL PRODUCTION OF BRAZIL—Continued

<i>Products</i>	<i>Number of Factories</i>	<i>Units</i>	<i>Production</i>
<i>Firearms, Ammunition, and Firecrackers</i>	568		
Rifles, shotguns, muskets, etc.		unit	2,064,102
Iron or lead bullets, etc.		kgs.	1,312,082
Detonators in unloaded cartridges		unit	954,597
Same		boxes	1,823,420
Detonators in loaded cartridges		unit	235
Same		boxes	1,664,540
Firecrackers and rockets		unit	619,155
Same		bales	1,065,978
<i>Lamps, Batteries and Electrical Appliances</i>	247		
Miscellaneous lamps		unit	29,125,442
Electric batteries		unit	348,027
Electrical appliances		unit	5,949,939
<i>Cheese</i>	4,989		
"Minas" type cheese		kgs.	7,451,063
Other types of cheese		kgs.	6,831,128
Cheese spreads		kgs.	1,529,149
<i>Paints and Varnishes</i>	1,188		
Paints prepared with water		kgs.	7,305,188
Paints and polishes prepared with oil		kgs.	15,347,642
Same prepared with pyroxylin		kgs.	749,897
All other kinds of polishes		kgs.	1,407,313
Bituminous paints, prepared with coal tar		kgs.	822,274
Writing, stamping, marking ink		kgs.	2,670,969
Same		liters	3,569
Same		bottles	3,062
Printing ink		kgs.	2,568,519
Corrosive, gilding, silvering or bronzing paints		kgs.	205,337
Waxes, varnishing waxes, liquids for cleansing or preserving metals, furniture, etc.		kgs.	28,063,598
Ribbons, for typewriters and calculating machines		unit	429,912
Powder chemical paints, coloring minerals, copper, chromium oxides, etc.		kgs.	24,277,838
Paints and varnishes for domestic use		kgs.	686,605
<i>Fans</i>	30		
Miscellaneous fans (not electrical)		unit	541,332
<i>Rubber Articles</i>	164		
Tires		unit	282,733
Inner tubes		unit	139,854



# INDUSTRIAL PRODUCTION OF BRAZIL—Continued

<i>Products</i>	<i>Number of Factories</i>	<i>Units</i>	<i>Production</i>
Raincoats, all types		unit	111,958
Rubber bags for tobacco, hot water, ice and similar purposes		unit	48,972
Girdles and corsets of all kinds		unit	23,172
Rubber belts, caps and suspenders		unit	345,095
Trunks and bathing suits		unit	16,939
Garters		pairs	557,361
Gloves for surgeons, electricians and other purposes		pairs	12,376
Rubber in sheets		kgs.	106,225
Carpets, stair carpets or mats		kgs.	118,856
Fire hose		kgs.	101,069
Garden hose and similar types		kgs.	173,166
<i>Shaving Brushes and Cutlery</i>	63		
Shaving brushes		unit	488,256
Cutlery instruments		unit	1,285,337
Same		packages	1,859,492
<i>Combs, Brushes, Dusters and Brooms</i>	1,452		
Combs, all kinds		unit	8,147,688
Brushes, hat, nail, hair and tooth		unit	13,201,972
Brushes for cleaning shoes, leather, furniture, metals, etc.		unit	1,342,798
Dusters		unit	977,057
Brooms, all types		unit	7,902,327
<i>Toys</i>	318		
Miscellaneous toys		unit	2,415,388
<i>Leather and Other Miscellaneous Products</i>	3,176		
Trunks, suitcases and baskets		unit	1,501,765
Folders, binders, etc.		unit	314,554
Leather jackets, capes and coats		unit	1,517
Leather belts (policemen, soldiers, cowboys, etc.)		unit	295,970
Leather bags for football and other sports		unit	147,453
Boxing gloves		unit	216,604
Saddles and riding accessories		unit	1,816,788
Handbags, wallets, change purses, etc.		unit	4,573,869
<i>Costume Jewelry and Ornaments</i>	653		
Miscellaneous costume jewelry		kgs.	121,475
Useful objects considered ornamental		kgs.	88,089
Paper or cardboard lampshades		kgs.	7,887
Ornaments made of amber, alabaster or plastic		kgs.	413,328



## INDUSTRIAL PRODUCTION OF BRAZIL—*Continued*

<i>Products</i>	<i>Number of Factories</i>	<i>Units</i>	<i>Production</i>
Clocks and watches		unit	16,894
Picture frames		unit	548,659
<i>Gasoline, Oils and Calcium Carburets</i>	49		
Calcium carbide		kgs.	23,709,394
Mineral fuel oils		kgs.	100,339,531
Mineral lubricating oils		kgs.	20,569,253
<i>Tiles, etc.</i>	1,015		
Tiles		sq. meters	3,124,805
Mosaic		sq. meters	60,763
Glazed tiles		sq. meters	828,826
Bricks		sq. meters	109,786
Short lengths of wood for flooring		sq. meters	936,496
Sewer pipe		unit	8,087,858
Marble		sq. meters	5,108
<i>Musical Instruments</i>	79		
Pianos, player pianos, string instruments, victrolas, etc.		unit	171,553
Music rolls for player pianos		unit	25,604
Victrola records		unit	343,279
<i>Optical and Photographic Equipment</i>	40		
Cameras and moving picture cameras		unit	1,520
Photography paper		kgs.	13,030
Plates and films		kgs.	98,202
Eyeglasses, monacles, etc.		unit	94,976
<i>Stoves and Heaters</i>	259		
Coal or oil		unit	155,162
Gasoline, kerosene and alcohol		unit	183,429
<i>Cement</i>	7		
All types		kgs.	744,350,190
<i>Thread, Ribbons, Strings and Buttons</i>	257		
Ribbons and strings		kgs.	6,172,364
Sewing and embroidery thread		kgs.	3,005,023
Buttons		kgs.	548,333

## VOLTA REDONDA STEEL PLANT

No more than a railroad whistle stop in the days before the war, the once sleepy village of Volta Redonda is now a great steel town, girded with tracks, crawling with yard engines and tramped by the feet of thousands of workmen. A lilliput-land suddenly grown to giant proportions, it is becoming the steel center of rapidly industrializing Brazil and keeping pace with its rising importance. It has become a model community of homes, housing and families of 4,625 steel workers. Strategically situated on the Paraíba River



at a distance of 90 miles from Rio de Janeiro, it is located in the very center of the raw material, and transport systems that will feed and enrich its lifeblood.

The veins of supply are the 15,000,000,000 ton iron ore deposits and manganese resources in the State of Minas Gerais to the north, and the coal fields of the State of Santa Catarina to the south. To meet the electrical demands of the plant, power will be obtained from the Rio de Janeiro Tramway, Light and Power Company, whose hydro-electric generating station lies thirty miles to the east. Water will be drawn into both a high head and low head system from the nearby Paraíba River. The arteries of distribution for the plant's steel products will be a one meter gauge railroad which serves the port of Angra dos Reis and the Brazilian Central Railway, which operates between the industrial center of São Paulo and the port of Rio de Janeiro. To stimulate the flow along the latter line the railroad is being electrified and tunnels are being widened. The largest industrial project in Brazil, valued at \$65,000,000 the steel plant was financed by Brazilian and American capital; and, constructed by Brazilian labor and materials, it is being equipped with American machines and tools. Operation of the the entire plant is scheduled for 1945.

Principal products of Volta Redonda will be coke, pig iron, blooms, billets, structural shapes, sheets, rails, tin plate, merchant steel, plates and reinforcing bars. Coke will be made from a mixture of domestic and foreign coals. About 670,000 tons of coal will be required annually for coke manufacture and about 100,000 tons for steam generation and electric power. Coke will be made in a 55-oven plant which has a coal handling system of 200 tons an hour capacity and an eight-ton coke pusher. Connected to this is a coke by-products plant where ultimately production of benzol for motor fuel, toluol for TNT and Xylol for explosives will be produced.

The steel plant has one blast furnace, with a nominal capacity of 1,000 tons, and three open hearth furnaces, two stationary and one tilting. The rolling mills at the plant are able to convert annually 368,000 net tons of ingots into 267,000 net tons of normal commercial shapes and flat rolled products. Based on a yield of 85% of ingot weight, the capacity of the blooming mill is estimated at 125 net tons an hour for rolling blooms over 8x8 inches, 75 net tons for billets down to 5x5 inches, and 150 net tons for slabs. The plate mill, designed to produce roughing slabs for the hot strip mill, has an estimated capacity of thirty net tons of plates an hour. Also linked to the plant is a sheet mill department, a tin mill department, a splice bar and tie plate plant, a roll shop, and a rail and structural mill for the production of rails, structural and miscellaneous shapes, bars and small billets.

Steam and electric power will be generated in a power plant, housing electrical generators, boilers, blowers for supplying air to the blast furnaces, air compressors and fire pumps. Steam will be generated by four boilers, with a total capacity of 75,000 pounds of steam and 425 pounds gauge pressure with a temperature of 700 degrees at 200% of rating. Virtually all of the electrical current necessary to the plant's operation will come from the Rio de Janeiro Tramway, Light and Power Company. The total connected electrical load of the plant will be 75,000 horsepower. Maximum lighting load per hour will be 14,000 kilowatts. Blast furnace gas will be burned in the blast furnace stoves and the boiler house and coke oven gas in the splice bar furnace, the tin and galvanizing pots, the tin and sheet



annealing furnaces and at the boiler house, when available. Both blast furnace and coke oven gas will be burned in the open hearth furnaces, the slab and billet heating furnaces and the soaking pits.

Total production capacity of the plant as now constituted will be about 350,000 tons. Present capacity of the Brazilian steel industry is about 160,000 tons. Steel production, encouraged by constantly dwindling imports and increasing domestic demand, has jumped 39% in volume and over 90% in value since the beginning of the war in Europe. Production which amounted to only 114,095 tons with a value of \$4,508,450 in 1939, reached 159,614 tons valued at \$8,872,200 in 1942.

### **BRAZIL'S NATIONAL MOTOR FACTORY**

Only a few years ago, a mosquito-breeding, malaria-infested swamp, the site of Brazil's National Motor Factory, situated 22 miles from Rio de Janeiro, is now well-drained and pest-free and will soon house the first plant in Latin America to build airplane engines from start to finish. Completely air-conditioned, fluorescent-lighted and windowless, the 700 foot long factory will contain the latest and most modern American equipment and will be served by the nearby Rio-Petropolis railroad and a three-lane concrete highway. Final cost of the entire project will be approximately \$9,000,000. Crankcases and aluminum parts will be manufactured on one side of the factory; steel parts and crankshafts on the other. Castings will be fed into the plant from an aluminum and brass factory close by.

Like the majority of Brazilian factories it is built of reinforced concrete, but it will be distinctly different from the others in the country in its internal setup. Emphasis here is on an overhead power system, with machinery freely fastened to the floor to facilitate future movement. Further, an electrical control station with a dominating view of the entire internal plant area will centralize control in one man. Top production will exceed 500 Wright Whirlwind 450-horsepower engines a year on one eight-hour shift. Ultimate hope, however, is to enter production of the larger 1,200 horsepower engines. For company workmen and executives, a model community of modern, well-equipped single family homes and apartment houses are being built. A hospital has been constructed and a cooperative store for workmen has been established. Present plans presuppose an eventual community population of 6,000 families.

Behind this significant development is a story of truly unselfish Brazilian-American cooperation. The Export-Import Bank made credits available; the Wright Aeronautical Corporation authorized the manufacture in Brazil of Wright Whirlwind engines; and, more recently, the Brazilian Government entered into contracts with the Fairchild Engine and Airplane Corporation to build six cylinder Ranger inline, air-cooled engines at the factory. Father of the idea is the energetic, aviation-wise, forty-three-year-old Air Brigadier Antonio Guedes Muniz, of the Brazilian Air Force. A leading Brazilian airman, designer and builder of his country's first plane, the 1935 model Muniz M-7 biplane, he foresees a significant Brazilian technological advance arising from the plant's operation.

This factory will show Brazilians new techniques in making mechanical parts and in erecting factories. Using Brazilian resources, the plant will make engines for new planes, replacement engines for planes already in service and spare parts, cylinders, crankshafts, crankcases, oil pumps, gears, gaskets, and connecting rods.



What this means to the Allied war effort and Brazil's transportation future is readily evident in one glance at her giant size, extensive coastline and hill-studded terrain. It will help enormously in relieving the strain now put on railroads.

### IV. BRAZIL'S FOREIGN TRADE

The development of Brazil's foreign trade during the last few years can, in a great measure, be attributed to the promotion of exports of basic and strategic materials, and other merchandise considered essential to the war effort.

The latest statistics show that Brazil continues to maintain a favorable balance in her foreign trade, as follows:

<i>Year</i>	<i>Exports (Tons)</i>	<i>Imports (Tons)</i>
1940 .....	3,236,916	4,336,133
1941 .....	3,535,557	4,049,338
1942 .....	2,659,548	3,003,044
1943 .....	2,696,089	3,302,975
1944 .....	2,671,405	3,779,318

Value of these exports and imports in U. S. dollars:

1940 .....	\$248,026,900	\$248,207,450
1941 .....	336,470,050	275,720,850
1942 .....	374,750,000	232,200,000
1943 .....	436,400,000	303,650,000
1944 .....	536,325,450	398,257,000

### V. BRAZIL'S TRADE WITH THE UNITED STATES

Brazilian trade with the United States during the years 1939-43 was as follows:

<i>Year</i>	<i>Value in U. S. Dollars</i>	
	<i>Exports to the U.S.</i>	<i>Imports from the U.S.</i>
1939 .....	\$107,250,000	\$ 79,886,144
1940 .....	\$105,155,000	\$109,643,722
1941 .....	\$138,892,000	\$146,006,327
1942 .....	\$165,215,000	\$103,898,000
1943 .....	\$228,000,000	\$156,308,000

### U. S. IMPORTS FROM BRAZIL BY PRODUCTS (1940-1942)

<i>(Value in thousands of dollars)</i>			
COMMODITY	1940	1941	1942
<i>Animals and Animal Products, Edible</i>			
Meat products .....	2,015	2,667	2,203
Veal, pork, mutton, lamb, etc., fresh or frozen. —	—	2	—
Beef, canned, including corned beef.....	1,980	2,568	2,160
Beef and veal, pickled or cured.....	11	13	7

Note: — (dash) indicates nil, or data omitted for security reasons.



**U. S. IMPORTS FROM BRAZIL BY PRODUCTS FOR THE YEARS  
1940-1942—Continued**

COMMODITY	1940	1941	1942
Pork, pickled or cured.....	2	7	14
Sausage casings .....	21	75	21
Butter .....		—	1
Cheese .....	1	11	5
Fish, except shellfish, dried, canned, smoked or salted .....	1	(+)	3
Meat extract, including fluid.....	42	48	137
<i>Animals and Animal Products, Inedible</i>			
Hides and skins, raw, except furs.....	5,516	9,557	—
Cattle hides .....	1,854	4,809	—
Sheep and lamb skins.....	615	1,040	739
Goat and kid skins.....	1,627	1,905	2,094
Leather .....	129	1,236	2,307
Sole leather .....	(+)	223	1,138
Cattle side upper leather.....	(+)	252	209
Calf and kip leather.....	1	34	31
Cattle side upper splits, rough.....	—	24	46
Upholstery, bag, glove, garment, etc., leather..	—	48	99
Sole and belting leather offal.....	(+)	265	151
Other leather, rough, partly finished, etc.....	12	17	44
Sheep and lamb, goat and kid leather, except glove and garment .....	(+)	1	2
Reptilian or shark leather.....	—	91	160
Pig and hog leather, excluding glove and gar- ment .....	111	215	183
Goat, kid, pig and hog glove and garment leather .....	5	5	—
Cattle, calf and kip leather, grained, embossed, or fancy .....	—	60	40
Leather luggage, flat goods, handbags, etc... ( + )		2	2
Furs, undressed .....	377	610	281
Beef and mutton tallow.....	—	—	61
Bones, hoofs, and horns, unmanufactured...	68	157	43
Bristles, sorted, bunched or prepared.....	—	6	—
Hide cuttings, raw, with or without hair....	12	32	46
Casein or lactarene and mixtures.....	(+)	26	230
Beeswax, crude .....	368	533	548
Tankage, not for fertilizer.....	190	345	54
<i>Vegetable Food Products and Beverages</i>			
Grains and preparations .....	1	1	6
Rice .....	—	1	6
Oil cake and oil-cake meal.....	345	256	84
Oil cake and oil-cake meal, cottonseed.....	345	173	84
Bran, shorts, and other wheat by-product feeds	333	69	19
Vegetables and preparations .....	77	820	259

(+) — *Less than 500.*



**U. S. IMPORTS FROM BRAZIL BY PRODUCTS FOR THE YEARS  
1940-1942—Continued**

COMMODITY	1940	1941	1942
Tapioca, tapioca flour, and cassava.....	57	788	233
Fruit and preparations .....	1	19	9
Bananas, green or ripe.....	—	17	—
Brazil or cream nuts.....	2,265	2,994	1,919
Vegetable oils and fats.....	385	1,609	489
Cacao butter .....	—	256	38
Corn or maize oil.....	5	(+)	—
Cottonseed oil .....	380	1,352	452
Cocoa or cacao beans and shells.....	6,632	12,838	6,987
Coffee .....	55,718	88,099	78,853
Spices .....	53	261	—
Vanilla beans .....	2	60	3
Tonka beans .....	51	202	100
Anise, cummin, fennel, and coriander seed, etc.	1	—	—
Cordials, liquors, kirschwasser, ratafia, compounds, and bitters .....	—	—	2
Champagne, sparkling wine, vermouth, still wine .....	(+)	2	2
Erva mate, advanced in value or condition...	3	4	29

*Vegetable Products, Inedible  
(Except Fibers and Wood)*

Rubber, crude, except guayule.....	1,899	1,993	—
Gutta balata .....	133	199	—
Gutta-percha and other guttas n.e.s.....	74	71	—
Gums, resins, and balsams n.e.s.....	56	325	451
Chicle, crude .....	1	2	25
Styrex, and other crude balsams not containing alcohol .....	36	49	52
Drugs, herbs, leaves, roots, etc.....	239	356	—
Cube (timbó or barbasco) roots.....	114	152	30
Ipecac .....	78	153	238
Pituitary, thyroid, and other glands, fish livers, etc. ....	21	33	40
Oil seeds .....	6,626	10,112	—
Castor beans .....	3,470	7,537	—
Sesame seed .....	9	2	—
Babassú nuts and kernels .....	2,916	2,159	2,296
Murumuru kernels .....	119	87	58
Tucum kernels .....	112	326	302
Pressed or extracted vegetable oils and fats...	10,357	19,142	—
Vegetable tallow .....	6	101	8
Carnaúba wax .....	7,808	12,988	9,193
Ouricuri and other vegetable wax.....	238	1,063	1,038
Oiticica oil .....	2,218	4,825	226
Castor oil .....	(+)	106	—
Essential or distilled vegetable oils.....	364	1,437	1,258

(+) — *Less than 500.*



**U. S. IMPORTS FROM BRAZIL BY PRODUCTS FOR THE YEARS  
1940-1942—Continued**

COMMODITY	1940	1941	1942
Lemongrass oil .....	(+)	1	5
Lemon oil .....	—	1	—
Orange oil .....	13	338	306
Lime oil .....	—	(+)	3
Lignalee or bois de rose (rosewood oil) .....	351	1,077	853
Canary seed .....	—	—	1
Orchid plants .....	8	8	(+)
Tobacco, unmanufactured .....	(+)	(+)	—
Cigar lead (filler) .....	(+)	(+)	—
Vegetable ivory, or tagua nuts .....	—	—	6
Flaxseed screenings, schalpings, chaff or scouring .....	—	—	1
Cut flowers, fresh, dried, prepared .....	11	41	11
<i>Textile Fibers and Manufacturers</i>			
Cotton, unmanufactured, including linters...	1,103	4,181	1,581
Cotton linters .....	1,043	4,063	1,526
Cotton waste .....	73	379	149
Cotton cloth .....	(+)	45	90
Burlaps, fabrics, and bags, entirely or partially jute .....	—	38	—
Flax, unmanufactured .....	—	11	15
Cords and twines, entirely or partially manila, sisal, henequen or other hard fibers .....	(+)	(+)	—
Wool, unmanufactured .....	525	1,618	—
Carpet wool and all other wool not finer than 40's .....	55	73	—
Clothing wool .....	60	228	—
Combing wool .....	410	1,318	—
Wool noils .....	2	2	—
Wool waste .....	2	27	3
Wool rags .....	3	12	3
Animal hair, unmanufactured .....	107	345	317
Wood—Hardwood and cabinet wood, logs...	50	57	—
Mahogany logs .....	6	(+)	—
Pine, sawed .....	8	31	(+)
Hardwood, sawed and floorings, planed, tongued and grooved .....	329	344	—
Mahogany .....	319	295	—
Baskets and bags of bamboo, straw, willow, wood .....	1	4	(+)
Rags, waste bagging, manila rope, and other paper-making stock .....	18	11	362
<i>Non-Metallic Minerals</i>			
Petroleum and products .....	(+)	—	—
Brazilian pebble, unmanufactured .....	264	3,821	—

(+) — *Less than 500.*



**U. S. IMPORTS FROM BRAZIL BY PRODUCTS FOR THE YEARS**  
**1940-1942—Continued**

COMMODITY	1940	1941	1942
Mica, unmanufactured, including scrap.....	196	446	—
Mica, cut or stamped, films and splittings....	5	11	—
Monazite sand and other thorium ore.....	7	25	—
Diamonds, rough or uncut.....	323	2,281	478
Diamonds, cut, unset, for jewelry.....	140	678	2,686
Diamonds, industrial (glaziers' and engravers' unset) .....	3,656	3,470	—
Emeralds, rough or uncut, cut but not set....	—	18	7
Other precious and semiprecious stones, rough or uncut, cut but not set.....	175	399	—
<i>Metals and Manufactures, except Machinery and Vehicles</i>			
Iron ore, inc. manganiferous iron ore.....	461	479	—
Tanks, or vessels, for holding gas, liquids, etc.	6	23	18
Manganese ore .....	1,729	3,368	—
Chrome ore or chromite.....	37	79	—
Tungsten ore and concentrates.....	—	(+)	—
Beryl or beryllium ore.....	10	100	—
Rutile ore .....	12	287	—
Tantalum ore .....	26	96	—
Zirconium ore .....	49	173	—
Bauxite, crude .....	—	90	—
Lead ores, flue dust, bullion, pigs, bars, for smelting or refining in bond and export...	5	—	—
Platinum .....	1	1	—
<i>Chemicals and Related Products</i>			
Glycerin, crude .....	—	9	—
Argols, tartar, and wine lees, crude or partly refined .....	2	56	156
Nitrogenous fertilizer materials .....	302	441	126
Dried blood n.s.p.f.....	77	114	73
Tankage .....	18	28	27

(+) — *Less than 500.*

**U. S. EXPORTS TO BRAZIL (1940-1942)**

*Selected Sub-Group Totals—Dollars*

COMMODITY	1940	1941	1942
Meat products .....	2,594	28,640	—
Animal oils and fats, edible.....	—	5,255	—
Dairy products .....	41,847	40,589	58,000
Fish products .....	9,888	18,534	—
Hides and skins, raw, except furs	7,800	941	—
Leather .....	188,246	390,951	112,000
Leather manufactures .....	155,365	277,237	219,000



## U. S. EXPORTS TO BRAZIL (1940-1942)

COMMODITY	1940	1941	1942
Furs and manufactures.....	74,497	153,870	518,000
Grains and preparations.....	786,531	861,516	482,000
Fodders and feeds .....	—	350	—
Vegetables and preparations....	81,738	67,577	94,000
Fruits and preparations .....	—	1,126,685	204,000
Fresh fruits .....	799,861	932,525	17,000
Dried and evaporated fruits....	121,452	177,513	166,000
Canned fruits .....	5,487	10,823	—
Rubber and manufactures.....	1,386,378	1,394,333	316,000
Naval stores, gums and resins...	648,771	1,330,727	598,000
Vegetable oils, inedible.....	323,904	741,476	—
Seeds, except oil seeds.....	5,624	54,265	69,000
Tobacco and manufactures.....	28,726	29,351	151,000
Tobacco, unmanufactured .....	26,734	25,319	57,000
Cotton semi-manufactures .....	3,104	598,806	270,000
Cotton manufactures .....	863,323	1,193,135	602,000
Cotton cloth, duck and tire fabrics .....	666,410	734,415	120,000
Wool manufactures .....	77,856	162,428	159,000
Silk manufactures .....	318,083	294,073	22,000
Rayon and other synthetic textiles	35,362	213,680	189,000
Wool, unmanufactured .....	204	11,561	—
Sawmill products .....	22,325	32,200	—
Boards, planks and scantlings—			
Softwood .....	10,437	19,112	—
Hardwood .....	3,308	7,723	—
Wood manufactures .....	165,698	298,361	129,000
Paper base stock.....	1,949,016	3,277,431	860,000
Paper and manufactures.....	951,689	1,698,178	1,994,000
Coal and coke.....	4,589,611	4,811,982	3,251,000
Petroleum and products .....	6,762,482	7,380,818	—
Motor fuel and gasoline, except natural gasoline .....	1,932,371	1,106,332	—
Gas oil and fuel oil.....	297,155	198,311	—
Lubricating oil .....	2,879,401	4,091,722	—
Glass and glass products.....	418,725	990,478	1,436,000
Clay and clay products.....	433,511	648,227	1,044,000
Iron and steel semi-manufactures	12,401,692	15,166,921	7,416,000
Steel mill manufactures .....	9,356,310	9,987,165	4,858,000
Tubular products and fittings..	2,289,023	3,058,256	1,261,000
Wire and manufactures.....	2,062,754	2,432,614	843,000
Iron and steel advanced manu- factures .....	1,536,872	3,311,583	2,712,000
Tools .....	701,761	1,248,958	849,000
Aluminum and manufactures...	569,178	205,878	—
Copper and manufactures.....	1,592,872	2,113,449	—
Brass, bronze and manufactures.	568,629	340,375	244,000
Electric machinery and apparatus	7,735,563	11,751,811	8,864,000
Radio apparatus .....	2,001,204	2,991,891	2,929,000
Industrial machinery .....	11,581,770	14,888,446	9,173,000



## U. S. EXPORTS TO BRAZIL (1940-1942)

COMMODITY	1940	1941	1942
Mining, well and pumping machinery . . . . .	976,247	1,224,744	851,000
Power-driven metal-working machinery . . . . .	820,705	2,244,673	1,268,000
Other metal-working machinery. . . . .	82,140	147,968	—
Textile machinery . . . . .	869,763	1,188,923	843,000
Office appliances . . . . .	1,726,044	2,714,234	820,000
Printing and bookbinding machinery . . . . .	447,927	706,195	242,000

## LEND-LEASE TO BRAZIL

By her recent authorization of a first payment of \$35,000,000 to the United States, covering the first three installments for materials received under Lend-Lease, Brazil became the first Latin American country to start settlement of its obligations to the United States.

The exact total of Lend-Lease loans to Brazil, and other countries as well, has not yet been publicly revealed for security reasons. Two agreements, however, were signed with Brazil. The first, arranged October 1, 1941, is said to have provided for total aid of \$100,000,000, primarily in the form of materials for construction of defense bases at Natal on the Brazilian bulge and other sections. The second, signed March 3, 1942, provided for an additional \$100,000,000 to speed Brazilian armament and defense.

According to a statement made by Leo T. Crowley, U. S. Foreign Economic Administrator, Lend-Lease furnished by the United States to Latin American countries between March, 1941, and December 31, 1943, represented .08 percent of total Lend-Lease exports and amounted to \$127,967,000 during that period.

More than 63 percent of the above mentioned total went to Brazil and was used to re-equip her Army, Navy and Air Forces for the common defense of the Hemisphere.

Brazil is supposed to have received "more than one-half" of Lend-Lease shipments to Latin America, which up to December 1, 1944, amounted to \$207,700,000, according to the latest quarterly report to Congress.

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### BRAZILIAN GOVERNMENT TRADE BUREAU PUBLICATIONS

1. Corporations, Labor and the Tax System in Brazil.
2. Brazil at War.
3. Strategic Minerals in Brazil.
4. Brazil's Medicinal and Useful Plants.
5. Timber in Brazil.



## BOOKS AND PAMPHLETS ON BRAZIL

### BUSINESS

*"Establishing a Business in Brazil"*—Inquiry Reference Service, U. S. Department of Commerce, Washington, D. C.—January 1944.

*"Trading under the laws of Brazil"*—Trade Promotion Series No. 183, U. S. Department of Commerce, Washington, D. C.

### LABOR

*"Consolidation of Labor Legislation in Brazil,"* Vol. XLVIII, No. 6, December 1943 issue of *"International Labor Review,"* pp. 755-758.

### STATISTICS

*"Trade of the United States with Brazil in 1940"*—International Reference Service, Vol. 1, No. 51, 1941. Bureau of Foreign and Domestic Commerce, U. S. Department of Commerce, Washington, D. C.

*"Foreign Commerce and Navigation of the United States for the Calendar Year 1941"*—U. S. Department of Commerce, Washington, D. C.

*"United States Trade with the Other American Republics"*—1942—U. S. Department of Commerce, Washington, D. C.

### GENERAL LITERATURE

*"Brazil, Land of the Future"*—Stefan Zweig—Viking Press, New York. \$3.00.

*"Brazil on the March"*—Morris L. Cooke—Whittlesey House, New York. \$3.00.

*"The Conquest of Brazil"*—Roy Nash—Harcourt Brace & Co., Inc., New York. \$8.50.

*"Amazon Throne"*—Bertita Harding—Bobbs-Merrill Co. (Out of print)

*"Brazil in the Making"*—José Jobim—Macmillan Company, New York. \$3.50.

*"Brazil in Capitals"*—Vera Kelsey—Harper Bros., New York. \$3.50.

*"Seven Keys to Brazil"*—Vera Kelsey—Funk & Wagnalls, New York. \$3.00.

*"Brazil Builds"*—Philip L. Goodwin and G. E. Kidder Smith—Museum of Modern Art, New York. \$6.00.

*"Negroes in Brazil"*—Donald Pierson—University of Chicago Press. \$4.50.

*"A History of Brazil"*—Calogeras—University of North Carolina Press. \$4.00.

*"Rebellion in the Backlands"*—Cunha—University of Chicago Press. \$5.00.

*"New World Guides to the Latin American Republics"*—E. P. Hanson—Duell Sloan & Pearce, New York. \$5.00.

*"I Like Brazil"*—Jack Harding—Bobbs-Merrill Co. (Out of print)

*"Brazil—A Study in Economic Types"*—J. F. Normano—University of North Carolina Press. \$3.50.

*"Brazil, Giant to the South"*—Alice Rogers Hager—Macmillan Company, New York.

The above books may be purchased through any local bookstore.

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Brazil. Ministério das Relações Exteriores Departamento de Promoção Comercial, and Brazilian Government Trade Bureau. Brazil at War: Brazilian Government Trade Bureau. Brazilian Government Trade Bureau, 1945. Brazilian and Portuguese History and Culture, [https://link.gale.com/apps/doc/BVOFYK068796689/BPHC?u=yorku\\_main&sid=BPHC&xid=0a92abd8](https://link.gale.com/apps/doc/BVOFYK068796689/BPHC?u=yorku_main&sid=BPHC&xid=0a92abd8). Accessed 29 Oct. 2020.